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ABSTRACT

One of a series of schclarly books published each year in the field of American Indian economic development, this volume contains two articles regarding the development of American Indian energy resources. In the first article, Richard Nafziger traces the exploitation of American Indian tribes by energy corporations whose main goal is overall profit maximization, achieved by such strategies as monopolizing supplies and markets, exercising political power, and transnational corporation formation. In contrast, tribal goals are to maximize local economic benefits from a particular mine while minimizing environmental, social, and cultural costs. Nafziger suggests strategies for challenging the energy industry's enormous power. In the second article, Lorraine Turner Ruffing reviews the limited progress of individual Indian tribes and of collectives (such as the Council of Energy Resource Tribes) in obtaining a fairer share of their mineral wealth. She notes the many obstacles facing the Indians, including the power of transnational corporations, the system of American contract law, American misconceptions of the energy crisis, and Indian reluctance to share information among themselves. Ruffing suggests the formation of a coherent Tribal-level mineral policy as a significant strategy for increasing Indian income and control over mineral development. A guide to resource materials is included. (SB)

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AMERICAN INDIAN ENERGY RESOURCES AND DEVELOPMENT

Edited by

ROXANNE DUNBAR ORTIZ

Richard Nafziger

TRANSNATIONAL ENERGY CORPORATIONS AND AMERICAN INDIAN DEVELOPMENT

Lorraine Turner Ruffing

THE ROLE OF POLICY IN AMERICAN INDIAN MINERAL DEVELOPMENT

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INTRODUCTION

Roxanne Dunbar Ortiz

The Native American Studies Center, University of New Mexico, began publication in Spring, 1979, with *Economic Development in American Indian Reservations,* a collection of research articles by scholars in the field. Publication of the first book coincided with a two day conference on "Economic Development in Indian Reservations in New Mexico," which was attended by over 200 Indian and non-Indian planners, consultants and scholars, and by industry, tribal, New Mexico state and federal officials and representatives. The conference was cosponsored by the Native American Studies Center and the All Indian Development Association of the All Indian Pueblo Council. The *Report* from that conference includes the findings from a questionnaire administered to the participants.

Following the May, 1979, conference, the Planning Committee drew up plans for a continuous Seminar Series for Tribal Planners, based upon the discussions before, during and after the conference and upon analysis of the conference questionnaire and other questionnaires. In cooperation with the Department of Economics and the College of Arts and Sciences at the University, Native American Studies and the All Indian Development Association organized a course, Economics 439, "Topics in American Indian Economic Development for Tribal Planners." The course carries up to six credit hours of undergraduate credit in Economics, and may be offered as a short course, a regular semester course or in a summer institute.

During the academic year, 1979–80, three one-week, one-unit seminars were held at the University of New Mexico, in November, January and March, with a total of 98 Tribal Planners, officials, con-

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sultants and university graduate students completing the course. The seminar series will be offered in such a manner during every academic year.

Native American Studies produces several scholarly books, occasional papers and reports each year in the field of social and economic development of American Indian communities, focusing on the Southwest. Publications are, however, regional, national and international in scope, emphasizing retention, expansion, control and development of the land bases and cultures of American Indian communities. Publications appear in three series: Development, History and Literature. In addition to the present volume, two books appear in 1980: *Fightback: For The Sake of The People, For The Sake of The Land,* by Simon J. Ortiz, a book of narrative poetry focused on the experiences of Indian workers in the uranium industry in New Mexico, and the effects of that industry on Indian communities. Ortiz is from Acoma Pueblo and is a published poet and writer. Appearing in September, 1980, is Phillip Reno's monograph, *Mother Earth, Father Sky and Navajo Resources,* copublished with University of New Mexico Press. Also during 1980, a resource manual for Tribal Planners will be available.

The present volume is a contribution to the field of American Indian economic development, focusing on energy resources, a survival issue for American Indian communities.

In the Fall, 1978, following Congress' deregulation of the natural gas industry, Richard Nafziger submitted a paper to Native American Studies for publication. At the time, it seemed that Nafziger's strong condemnation of the energy corporations lacked the appropriate scholarly "objectivity" to be published from the university. However, events that have followed, particularly in the Middle East, makes Nafziger's analysis even more significant than was apparent in 1978.

As Nafziger notes, American Indian Tribes were the first victims of the energy industry. A century ago, the Cherokees and other Tribes in Oklahoma saw their governments dissolved by Congress to make their oil lands available for exploitation by corporations. A few decades later, the Papagos lost the greatest part of their reservation to the copper industry. Up to the 1970s, the petroleum industry continued exploiting Indian resources while Tribal governments had little authority to halt the process. The federal government failed to carry out its responsibility to protect Indian lands from intrusion, and, in

fact, was complicit in the expropriation of Indian lands and resources.

While Nafziger warns of the enormous power of the energy industry, he suggests that it can be challenged. His study is a provocative analysis of the energy industry, its structure and its motives toward American Indian resources, his conclusions based on the activities of the corporations in other parts of the underdeveloped world and past relations with American Indian Tribes. Among other conclusions, Nafziger recommends federal government nationalization of the energy industry.

Dr. Lorraine Turner Ruffing's study of the role of policy in American Indian mineral development complements Nafziger's analysis with a close look inside Tribal government structure and the Council of Energy Resource Tribes (CERT).

In 1975, CERT formed to correct inequitable agreements between Tribes and the energy corporations. Though American Indian Tribes, particularly the twenty-five CERT members, own substantial energy resources, their political and economic power compared to that of the energy industry are insignificant. Consequently, American Indian people and their leaders realize the importance of public opinion and federal affirmative action in the enforcement of the United States trust responsibility to Indian Tribes.

At the November, 1979, meeting of the Council of Energy Resource Tribes Board of Directors in Phoenix, one of the guest speakers, David Freeman, Chairman of the Tennessee Valley Authority (TVA), the only publicly owned energy enterprise in the United States, made a chilling and prophetic comment: "If radical changes are not made soon, the energy corporations will own America." That fact eludes many American citizens who find it all too easy to blame Iranians and Arabs and even American Indians for the world economic crisis.

During the twentieth century, the United States has temporarily resolved economic crises through war. However, war itself has become too disastrous, threatening annihilation of humanity. And the economic ills have not been solved through war production. The seriousness of the situation for American Indian people, for all Americans and for the world, calls for critical rethinking.

Though a small population, American Indian people are contributing profoundly to limiting the power and arrogance of the energy industry and those in elected political office who are owned by that industry. The ideas and theory reflected in this book are products

of the renewed vitality and creative energy in American Indian communities, which has produced extraordinary leaders and a young generation destined to have influence far beyond their numbers on the future of North America.

TRANSNATIONAL ENERGY CORPORATIONS AND AMERICAN INDIAN DEVELOPMENT

*Richard Nafziger**

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*RICHARD NAFZIGER is an economist researching issues of world minerals and energy development. He is a doctoral candidate in Political Economy at the New School of Social Research in New York. Nafziger has been a consultant to Tanzer Economics Associates in New York, and was Research Director for the Americans for Indian Opportunity (AIO) in Albuquerque, New Mexico.

Nafziger is a recognized expert in the area of uranium development and its effects on the environment and on people. His "Uranium, An Overview," will be published by

AIO. Nafziger has been researching American Indian development issues for several years and has written extensively on various aspects, including mineral development, the timber industry and possibilities for renegotiation and negotiation of agreements between Indian Tribes and corporations.

I. INTRODUCTION

A. Colonialism and Resource Exploitation

Until recent years, British and American resource corporations, with the full backing of their home governments, roamed the world freely plundering the raw materials of the peoples of Africa, Asia and America. Raw materials were extracted with little or no compensation to the people or governments in those areas. To secure control of these raw materials, a series of institutions were imposed on the people to foster dependency on the transnational corporations and their home governments. The raw materials became particularly important to the exploiting corporations and governments because of the high profits earned due to cheap labor and minimal royalties and taxes. In a sense, these resources fueled the industrial growth of the United States and Western Europe.

In cases where the people of a particular country would resist these colonial arrangements, they were brutally squashed by direct military invasion by the United States or other western powers, or would be subject to United States Central Intelligence Agency (CIA) coups. An example is the CIA overthrow of Iran's government in 1953. Iranian oil was exploited by the Anglo-Iranian Corporation, a consortium of British and American corporations in which British Petroleum owned 40 percent; Royal Dutch Shell, 14 percent; Exxon, Standard Oil of California, Texaco and Gulf each owned 7 percent; and Compainie Francaise Petrole owned 6 percent. The Anglo-Iranian Corporation received extremely high profits from the venture while paying minimum royalties. Iran's popularly elected president, Mohammad Mossadeq, badly needing revenue to finance economic development

for the Iranian people, followed the lead of Venezuela and Saudi Arabia who had negotiated 50–50 profit sharing agreements with the companies, and attempted to increase Iranian share of oil revenues. Although the Anglo-Iranian Corporation knew that they would eventually have to make changes in the inequitable agreement, its directors attempted to stall as long as possible. Meanwhile, Mossadeq nationalized the oil industry in Iran, offering the corporation more than adequate compensation, which it refused. Instead, the companies in the consortium quickly organized a boycott of all oil produced in Iran, which proved an effective weapon because British colonial policy had made Iran solely dependent on oil revenues and because the oil companies controlled all the oil markets.

The United States and British governments also intervened with threats of military force against Iran. In 1953, shortly after receiving a 99 percent vote of confidence through a plebiscite from the Iranian people, Mossadeq was overthrown in a bloody coup, admittedly backed, organized and directed by the CIA. In his place, a dictatorial despot, the Shah of Iran, whose "royal" family line began in 1923 by British invention, was put in power. As a consequence, the share of the Anglo-Iranian consortium granted to the American companies was raised from 21 percent to 40 percent. The overthrow of Mossadeq was described in the *New York Times* as "an object lesson to underdeveloped countries with rich resources who will now perceive the heavy cost that must be paid by one of their members who goes berserk."[1] So it is, whenever underdeveloped countries attempt to assert their sovereignty over their natural resources, which is a requirement in international agreements, they become targets for violent reaction: Guatemala in 1954; Lebanon in 1957; the Congo in 1964; Brazil in 1964; Indonesia in 1964; Dominican Republic in 1965; Vietman, 1964–1975; and, unsuccessfully, in Cuba in 1961 and Angola in 1977.

In the late 1950s and in the 1960s, developing nations began to challenge the dominance of their economies by a few monopoly corporations based in the United States. Unlike Iran and other countries that faced the wrath of United States aggression, some countries have met a great deal of success. The change that has allowed this to occur has been, first and foremost, the Vietman war which generated a strong anti-war, anti-interventionist mood in the American public, making it increasingly difficult for the United States government to

intervene on behalf of corporate interests. Other interventions have occurred, however, such as the destruction of the Allende government in Chile in 1973. But direct, open intervention is no longer possible. Secondly, many countries have found that they are stronger if they bond together. Raw materials associations have been formed to protect the interests of producing countries. Producers' Association, such as OPEC (oil), CIPEC (copper), and IBA (bauxite) and others. Third, near military parity between the United States and the USSR has made the United States more conscious of Soviet repercussions if the United States acts unilaterally to topple governments.

In response to this growing resistance, natural resource corporations have begun to get less involved in the development of resources in third world countries. Instead they have begun to concentrate their efforts and investments in western developed nations where conditions are "stable" and safe from such actions as producers' associations, nationalizations, and other forms of economic democracy.

B. American Indian Raw Materials

Although almost all oil and gas reserves located in American Indian reservations have been depleted, it is estimated that 33 percent of western low-sulfur coal; up to 55 percent of uranium reserves; significant deposits of oil shale; some geothermal locations; and important deposits of copper, nickel, zinc and phosphate are located on Indian lands in the United States.

Where particular resources, such as oil, are not present in adequate quantities and qualities within the developed nations, the strategy of the resource corporations has been to find or develop substitutes such as coal, uranium and coal gasification which can be monopolized by the same corporations. A key example of this strategy can be seen in the development of uranium as a substitute for oil. The location of uranium exploration and development efforts is a good indicator of the geographical direction of development efforts since the industry is so new that it has avoided confrontation with the third world. Almost all efforts have been concentrated in five developed countries: United States, 29.6 percent of known reserves; Australia with 24.6 percent; South Africa (actually colonized Namibia) with 17.9 percent; Canada, 12.8 percent and France with 8.8 percent, which includes the former French colonies of Niger and Gabon still under French economic con-

trol. Ninety-four percent of uranium exploration and development has been concentrated in these developed areas.[2] For all other mineral resources, 60 percent has been concentrated in eight or more developed countries.[3] Since uranium exploration development is a new phenomenon and developers are not eager to confront the same problems that have been faced in the past in underdeveloped countries, they have engaged in exploration only in "safe" areas.

Significantly, large proportions of the uranium production and reserves controlled within the five developed nations are located either within internal colonies of those nations, such as Indian reservations in the United States and aborigine reserves in Australia, or in colonies or neocolonies which remain controlled by developed nations. All of these are colonies whose resources and labor are being exploited considerably by energy resource corporations. In Australia, it is estimated that 80 percent of all uranium reserves lie on aboriginal lands. Aboriginal people in Australia, like American Indians, were pushed on to the least desirable lands within nations and have been virtually forced into accepting miserable agreements with energy corporations. The 1978 agreement between the aborigines and the companies (Ranger Uranium Agreement) gave the aborigines only 4.25 percent of the revenues of the uranium mine in royalties.

In Canada, where reservations encompass six million acres, Indian communities have faced intensive uranium exploration on or near reservation and claim areas. South African uranium production is dependent on the Rossing mine, the largest uranium mining venture in the world, which is located in South Africa's illegal (United Nations decision) colony of Namibia. The Namibians are virtually slaves for the energy corporations. Seventy percent of France's uranium comes from Niger and Gabon in west Africa. According to international minerals negotiator, Charles Lipton:

> The only agreements that are really worse than the ones entered into by Indian tribes are in French speaking African countries. The government of Niger has to pay the French government back dollar for dollar for investment in their uranium mines. That's about the worst deal there is.[4]

Twenty-five percent of United States' uranium production has come from Indian lands, from Laguna Pueblo in New Mexico which is the location of the world's largest uranium strip mine; from Navajo lands

in eastern New Mexico; and from the Spokane reservation in the state of Washington. All agreements on producing mines are leases with no provisions for profit-sharing in the highly profitable uranium industry, and they do not allow for control over operations by Tribal governments. These reservations are, in fact, resource colonies. An exception to this is the Navajo-EXXON uranium lease by which Navajos may choose a royalty or a 49% working interest which entitles them to 49% of the profits.

When the gravity of United States' fuel and non-fuel minerals crisis is considered, the existence of such a significant portion of these badly needed minerals on Indian and on Alaskan native lands can be frightening. The fact that politically and economically powerful energy corporations have shifted their focus towards development of the resources within the United States intensifies the situation. In New Mexico alone, by 1979, thirty-one companies are actively exploring and developing uranium on or around Indian reservations. Exploration efforts have nearly doubled since 1976, while the number of mines and mills has increased to seven mills and 43 mines. Current development efforts are expected to triple by 1985. Almost all of this development has occurred with such rapidity that Indian governments have had little chance to get an adequate assessment of the impacts of on and off reservation development, often forcing them into making hasty decisions.

San Felipe and Santo Domingo Pueblos in New Mexico have been faced with uranium development in areas immediately off their reservations over which they may have little or no control. Acoma Pueblo in New Mexico is beginning to find that the overwhelming uranium boom in the Grants mineral belt is having negative effects on their water quality and quantity. At the same time, New Mexico is facing a boom in coal development which could have an equally overwhelming effect, particularly on the Navajos.

In looking at this development, past experiences of American Indian people must be considered. Up until the 1920s, the Papago reservation in Arizona was three times its present size. The area that was taken from the Papagos is known as the Southern Arizona Copper Belt, an area which produces over 75 percent of United States' copper. When this huge copper belt was discovered to be on the Papago reservation, an Act of Congress took the land away from the Papagos. In the late nineteenth century, similarly, when gold was

discovered in the Black Hills of Dakota, that area guaranteed by treaty, was taken away from the Sioux. The most notorious land grab related to energy resources was in Oklahoma, then Indian Territory, where oil discovery brought acts of Congress which opened Indian Territory to oil companies and also to homesteaders. More recently, the Crow and Northern Cheyenne Tribes were trapped into coal leases, initiated by the Bureau of Indian Affairs which would have left them with ten cents a ton and a risk of cultural disintegration and environmental disaster.

Further energy development in Indian lands may prove to occur under different conditions, but the possibility is that if the situation for energy companies appears too grave for them in terms of continued profits, such options may be taken.

II. STRUCTURE AND GOALS OF ENERGY CORPORATIONS

Indian Tribal governments have the options of whether or not they wish to develop energy resources in their territories, how these resources are to be developed, at what speed development will occur, and how much they want if there is going to be development. Unfortunately, because of poor or misleading advice on the part of the Bureau of Indian Affairs in the past and from other parties, Tribal governments have exercised only the first option, leaving the others up to the direction of energy companies.

The accepted logic is that since raw materials extraction is capital intensive and technologically complex, it would be difficult or impossible for Indian communities to undertake development on their own. This logic says that if there is going to be any development at all, an Indian Tribe will have to enter into an agreement with a corporation which has the technology, access to capital and supposed "managerial expertise." The benefits Indians are to receive and the amount of control they are to exercise is dependent upon the balance of bargaining power between the Indian government and the company. This logic is distorted, and there are other alternatives. Before discussing options, it is important to describe these transnational energy corporations and how they work.

Like all corporations, the goal of the energy corporation is solely profit maximization. All actions and all other goals are directed toward achieving that goal. As profit-making corporations, the energy companies must accumulate capital, that is, create wealth. Production of raw materials creates wealth when labor is applied to land or resources. The value of the resource is increased in the productive pro-

cess by the application of labor. The difference between the initial value of the resource and the value after labor is applied is profit, with the corporation, rather than the laborers, harvesting the profit. Corporations direct all their activities toward achieving as great a profit as possible. They do this in two ways. The corporation can decrease costs by several means by becoming more efficient through advancement of technology or by keeping labor costs down or by keeping down raw material costs to resource owners. The other way corporations may gain greater profits is by increasing prices, by charging as high a price for their product as they can get away with.

Energy companies have been very effective in reaching their goals of profit maximization. They are the largest and most powerful corporations in the world. The energy industry's success in profit maximization is not the result of any factor other than they have had no choice. Stockholders, investors, and financiers have no intrinsic interest in any corporation. They invest, buy and loan because they wish to accumulate capital. They want the highest profit possible on their investment. If a corporation's management does not do this then it is thrown out. Therefore, a corporation's management must adopt as its main goal, "profit or die," and this is the key incentive for profit maximization.

Along with the goal of maximizing profits is the necessity to minimize risks. Risk is the chance that profits will not be maximized and is the negative side of profit maximization. To minimize risks a corporation will attempt to develop a profit maximization strategy which is the least vulnerable to high costs, low prices or any form of disruption. Energy corporations are particularly concerned with political disruptions such as nationalization of resources, expropriation of plants and equipment, regulation or any form of democratic public controls on their operations.

Energy corporations have devised a series of strategies which are interrelated for maximizing profits and minimizing risks. These strategies are: Monopolization of supplies and markets; Political power; Horizontal integration; Vertical integration; Transnational formation; and Growth.

A. Monopolization of Supplies and Markets

The major energy companies have attempted to monopolize the exploration, extraction, processing, transportation and marketing of all

energy sources. Competition reduces profits, and competitors try to steal supplies and customers by offering better deals and lower prices. Lower prices mean lower profits. The energy industry has been particularly successful in monopolization, though the industry has not always been non-competitive. In the early days of the petroleum industry, the major oil powers fought viciously over shares of the international oil market, each attempting to cut the prices of the others. The price war became so heated that it spread, affecting all oil companies in the world. As a result, the profits of the corporations involved fell rapidly.

Recognizing the damage to profits inflicted by price war, the heads of the three major oil corporations, Royal Dutch Shell, British Petroleum, and Standard Oil of New York, met at Achnacarry Castle in Scotland to put a stop to the price war and prevent recurrence of such behavior. The meeting produced an agreement which has come to be known as the "As Is Agreement of 1928." It set forth several principles for all energy companies to abide by:

- each company will accept and maintain their current share of the market.
- the facilities of each company will be made available to competitors on a favorable basis.
- each company can only add new facilities to meet the increased needs of their current customers.
- each company will maintain for their production area the financial advantage of its location.
- each company will draw supplies from the nearest production area only.
- Mechanisms will be created to deal with any surplus production in given geographical areas so that the present price structure will not be upset.[5]

Once the agreement was made, the companies then set up instructional agreements, such as "The Memorandum for European Markets," in January 1930; "Heads of Agreement for Distribution," in December 1932; and the "Draft Memorandum of Principles," in January 1934. These instructions precisely and specifically fixed production quotas for each company, fixed prices and conditions for sale and provided for mechanisms to deal with companies that did not belong to the cartel and which refused to abide by the rules.[6]

After the 1928 agreement was established, monthly meetings were held to work out any difficulties. There is considerable evidence that the meetings have gone on at least as late as 1971, and that they are probably still being held. In short, these agreements ban competition and establish monopoly based on tacit collusion.

Such agreements are really a relic of an earlier era which have been essentially replaced by a silent code of mutual self-interest. After years of working together, each corporation is well aware of the advantages of cooperation and what action will benefit the group and which action could result in retaliation. Because competition lowers profits, the energy companies realize that each will benefit in the long run by keeping prices high rather than by competing with one another.

Energy corporations do not depend solely on tacit agreements for monopolization of supplies and markets. Rather they create dependable mechanisms to guarantee cooperation. These include joint ventures, financial institutions and interlocking directorates.

1. Joint Ventures

A joint venture is a company which is owned by two or more parent companies. Energy corporations enter into joint ventures when a particular project requires a great deal of capital or if there is a need for complementary technology and research. Joint ventures are also established when there is risk in a project or when one company has a missing link in its operations that can be filled by another company. When one company enters into a joint venture with others, there is need for harmonious relations among them. None of the companies involved in a joint venture are likely to behave like competitors with one another since they would be competing with their own profit sharer. Joint ventures provide a common meeting place for allegedly competing companies to sit down and discuss common strategies such as prices. Joint ventures are commonly engaged in the building of long, expensive pipelines, for instance, the Alaska pipeline, and for bidding on government offshore leases and for the development of expensive mining projects.

2. Financial Institutions

Frequently, the same financial institutions provide capital and financial advice to supposedly competing corporations. The lending institution, necessarily desiring success for each of its customers, is

often able to provide advice leading toward greater cooperation. Furthermore, the lenders themselves are frequently major stockholders through trust funds and other means in a variety of competing corporations. Data on the extent of these relationships are secretively held by the involved institutions.

3. Interlocking Directorates

One way to facilitate intra-industry cooperation is through director interlocks. These are either direct or indirect. Direct interlocks occur when a director of one company sits on the board of a competitor. Though illegal, 12 percent of all interlocks are still direct. Indirect interlocks occur when directors from ostensibly competing corporations come together on a third non-competing corporation. In an interlocking situation it becomes difficult for directors to act against the interests of a corporation represented by a fellow director. As one expert on the subject puts it.

> The inherent tendency of interlocking directorates between companies that have dealings with each other as buyers and sellers or of providing services or that have relations to each other as competitors, is to blunt the edge of rivalry between them, to seek out ways compromising opposing interests. Even if there were no collusive purpose in that selection, the tendency to harmonize conflicting interests is built into the function of these directors.[8]

Such interlocking directorates provide a forum from which companies can battle common foes and work out common strategies for dealing with unruly interference in their operations. Interlocks are the rule in the energy industry. For instance, interlocking within Equitable Life Assurance Society, one of the largest United States' financial institutions and one which finances much of the energy resources exploitation includes: Ameranda Hess, a major marketer of Iranian oil; Atlantic Richfield, owner of Anaconda's Jackpile uranium operation at Laguna Pueblo, New Mexico; Continental Oil (Conoco); Diamond Shamrock Oil; Mobil Oil; Standard Oil of Indiana; Exxon and Texaco. Equitable Life Assurance Society obviously has vested interest in profitable exploitation of energy resources.

Monopolization and cooperation, then, are greatly enhanced by joint ventures, the role of financial institutions, and by interlocking

directorates. But there are other factors which support monopolization in the energy industry. These are called "natural factors," which make raw materials industries more susceptible to monopoly. There are barriers that prevent other firms from entering into the energy industry which are not imposed by the will of existing energy companies, the most important of these being the fact that large-scale firms are more efficient than small-scale firms. Once an industry is established, the firms which rise to prominence because of greater efficiency are able to keep other companies out because they have had the time to grow in size and thus produce each unit at a lower cost. The only company which can survive is one which is able to raise large amounts of capital, afford expensive technology and finance large and expensive research and development efforts. Energy exploration necessitates that a firm be able to operate a great number of units at one time. Since the rate of success in this area may be only one in fifteen, a company needs several exploration outfits as insurance against failure. If one proves to be successful it will more than compensate for funds lost by other units.

Without competition, energy firms may safely raise their prices to levels at which they can receive higher profits without facing competition through price-cutting by individuals. The success by the energy companies may be measured. However, these measurements cannot ascertain the effects on competition from interlocking directorates, common financial institutions, joint ventures and common ownership by common investors.

The degree of concentration in the energy industry indicates how many firms control how much of the production. Five United States' companies—Exxon, Mobil, Texaco, Gulf, and Socal—and two European companies, British Petroleum and Shell, control 88 percent of the oil produced outside the United States.[9] In the United States, only four companies—Exxon, Texaco, Gulf and Socal—control 37.2 percent of the reserves. Eight firms, the four above plus Shell, Mobil, ARCO and Standard of Indiana, control 64 percent. Twenty firms control 93.6 percent.[10]

In the uranium sector, four firms—Kerr-McGee, Exxon, Atlantic Richfield, and Gulf—control 55 percent of reserves, and eight firms control 80 percent—the above plus Getty Oil, United Nuclear, Utah International and Continental Oil. Seventeen firms control 100 percent of uranium.[11] Coal is less concentrated on paper since movement

into coal by oil companies and others has been recent and available data is only eight years old.

Another measurement of monopoly is the long term relation of cost to price or profitability. According to the Federal Trade Commission:

> The oil companies demonstrate a clear preference for avoiding competition through mutual cooperation and the use of exclusionary practices . . . profit rates for the eight largest companies are usually 10–20 percent greater than average American firms . . . with respect to uranium mining and milling concentration is even greater.[12]

The energy industry is monopolistic. Consequently, prices have been maximized and costs minimized with resulting maximization of profits. There is nothing inherently wrong with the fact that huge profits are being generated. The real issue is how the profits get used and distributed. Very obviously, energy-owning Indian communities and American consumers are not sharing the profits.

One particularly negative result of the lack of competition within the industry has been the refusal of companies to bid competitively on lands opened up for development in Indian reservations. According to the Federal Trade Commission: "Uranium sales on Indian lands have not been very competitive; thus Indian sellers do not receive the maximum value for their resources which could be received."[13]

B. Political Power

Another necessary strategy used by energy companies in the pursuit of profits is the building of political clout. Energy corporations and the United States' government have worked closely together largely because the energy corporations represent enormous concentrations of economic power. In the United States, economic power begets political power. There is a symbiotic relationship between the oil companies and the federal government. While energy companies seek profits all over the world, the government wants to assure that there are reliable supplies of oil for their military needs as well as for popular consumption. Each of these aims can be furthered by government support for the expansion of efforts by oil companies. If in the process of expansion the oil companies bring in huge profits from

abroad which help the nation's balance of payments, this too gives the government a stake in the industry's operations.

There is continuous two-way flow of personnel between the government and the energy monopolies. For example, former Secretary of State, John Foster Dulles, was senior partner in Exxon's law firm. Former Secretaries of State, Dean Rusk, Henry Kissinger and Carter's Secretary, Cyrus Vance, have all worked in various Rockefeller family interests for most of their careers. As is well known, the Rockefeller family is the major oil stockholder group in the world. Nelson Rockefeller was Coordinator of Inter-American Affairs in 1942 when Standard Oil interests were primarily in Latin America. He has appeared as Latin American policy advisor at every critical interval.

The United States' Department of State, as was pointed out in the beginning of this paper, frequently intervenes on the side of American energy companies. According to former State Department official, John Loftus, "A review of the diplomatic history of the past 35 years will show that petroleum has played a larger part in the external relations of the United States than any other commodity."[14] Jack Anderson, the newspaper columnist, has pointed out:

> The State Department has often taken its policies right out of the executive suites of the oil companies. When big oil can't get what it wants in foreign countries, the State Department tries to get it for them. In many countries, the American Embassies function virtually as branches of the oil companies."

The State Department has been proven to have pressured foreign governments by force to give American companies concessions in Iraq, Iran and Saudi Arabia. They were also involved in pressuring small American companies and foreign state owned companies from outbidding the monopolies in Iran in 1951, Iraq in the 1930s and in Libya in 1966.

Energy companies have benefited from state laws, also, such as the "Market Demand Act" in Texas which limits production below a level which would cause decreases in prices. They have benefited from federal laws such as the "Connally Hot Oil Act," which prohibits shipment of excess oil across state lines. This oil is defined as surplus which could result in lower prices. The companies have also benefited from establishment of the Interstate Oil and Gas Compact Commission which allocates market demand to different oil producing states

and enforces production in accordance with quotas, that is, price-fixing.

The biggest legislative coup for the energy industry was the 1978 "Natural Gas Deregulation Act." While withholding known supplies of cheap natural gas, the energy monopolies have claimed that natural gas reserves were inadequate and would not be found unless there was a major rise in prices or deregulation by the government. After a multimillion dollar lobbying effort by the energy industry, weak-willed Congressmen and the Administration bent to their demand.

Soon after, on January 15, 1979, the Secretary of Energy announced that due to huge surpluses of natural gas, conversion to coal would be curtailed and that utilities should convert to natural gas. Because of the time needed to find reserves and bring them into production, it is obvious that this "surplus" which suddenly appeared had to have been known for many years, long before the passage of the "Natural Gas Deregulation Act."

The energy industry has received huge subsidies in the form of research from the Department of Energy. Almost all the Department's research programs will produce technology, exploration data and technical assistance which will be given free, at taxpayers' expense to the energy companies. For example, a tiny segment of the energy industry, the nuclear industry has, as a whole, received massive support and assistance from the federal government. Uranium mining companies have received training and data amounting to $35 million per year. Altogether 85 percent of the total capital invested in the nuclear industry has come from the federal government, that is, taxpayers.

The strategy of the energy industry has been to leave risky or unprofitable areas of expenses in the hands of the federal government, while turning proven or profitable aspects over to the companies. As a result, the costs of energy development tend to be equitably shared by the public, while the profits go to the energy corporations.

The federal government also subsidizes the energy industry through a variety of tax breaks including depletion allowances, foreign tax credits and other preferential tax treatment. Therefore, in addition to the enormous profits of these companies, they operate at a low tax base, a fact that the "windfall profits tax" will not alleviate.

Energy companies have also been able to affect public policy through their influences on elections by use of their enormous surplus profits. Both Exxon and Mobil have set up huge funds entirely for

financing sympathetic candidates and parties in Italy who promised to work for oil company interests. Exxon is estimated to have spent 60 million dollars for that purpose and Mobil at least two million dollars. The political parties who received these funds became dependent upon them for a substantial part of their incomes and were thus not likely to become centers of agitation against the oil companies.[6] During that time period, ENI, the Italian state-owned competitor of Exxon and Mobil, ceased its competitive activities.

The behavior of Shell Oil on the Crow reservation illustrates a more subtle kind of bribery and an exploitation of extremely poor people. Shell attempted to coerce the Crows into approving a miserable coal lease by offering the Crow Tribal government a sum of money to be distributed immediately to each Crow citizen in per-capita payments of $250. Shell hoped that this would obscure the Crows' understanding of the real value of the coal. However, the offer was rejected in a referendum held by the Crows. Shell then raised their offer to $1000 per-capita. This also failed and the offer was raised further to $1500. The coal is worth $29 billion on the Crow reservation. Because of the confusion and disagreements created by these miniscule and cynical offers, factions developed within the Crow government and among the people.

Energy companies have used their extensive political power within the United States government to effectively squash anti-trust investigations of the energy industry. In 1952, the Federal trade commission, after obtaining company records through the Justice Department, launched an anti-trust case against the energy monopolies' cartel. The FTC had collected considerable data from the companies indicating monopolistic control of foreign products; curtailment of domestic production in order to maintain high price levels; the use of quotas to limit sales; limitation of United States' exports and imports; and exclusion of American independent firms from sources of supply.

With full backing from the Justice Department, the Federal Trade Commission filed suit against the major oil producers. The companies countered by arguing that investigation would jeopardize national security. They lost the first round in the courts, and realizing they could not win in the courts, the companies tried to apply pressure in the political arena. There they were successful. Before President Truman left office in 1953, he directed the Attorney General to replace the criminal suit with a civil suit doing away with the possibil-

ity of prison sentences, and also making more difficult the process of securing necessary documentary evidence. Immediately following Truman's decision, the National Security Council intervened in the case and transferred its prosecution from the department of Justice to the Department of State, because the case allegedly involved national security. The law firm of then Secretary of State, John Foster Dulles, Exxon's law firm, was the defense counsel for the companies. Following that move, the National Security Council intervened regularly, disallowing almost all evidence and limiting the scope of the case until it was stripped of all meaning and was finally dropped.

C. Horizontal Integration

Another major profit maximization strategy of the energy corporations has been to buy up control of potentially competing energy companies and sources of supply.

Control over raw materials can block entry into an industry by new firms, barring competition and allowing high rates of profit. The success of the energy companies in doing this with Mideast oil led them to seek monopolistic control over all energy sources.

Although definitive data on ownership of energy reserves are not available since they are considered secret, it is known that at least 50 percent of all uranium reserves and 61.8 percent of all uranium production are directly controlled by former oil companies that are now energy firms. In 1970, before oil companies really made their move into coal, oil companies controlled 33 percent of all coal production. Today it is estimated that they control a majority of the nation's coal reserves.

The apparent strategy of the oil companies has been to obtain control over all energy sources which could potentially be substituted for their oil. As a result, we now have an energy industry rather than separate uranium, oil and coal industries. The move toward horizontal integration has been prompted by two major factors. First, the actions of developing nations to gain control over their energy reserves has limited the control and access that the companies formerly had. In many cases, oil fields formerly controlled by transnational oil corporations have been completely nationalized. In others, the possibility of continued control is becoming increasingly uncertain. In the past, the great majority of profits made by these companies were from overseas oil fields in third world countries.

Secondly, environmental, economic and political events have made somewhat uncertain what energy sources will be used in the future. As most of the world's energy needs were formerly provided by oil, controlled by the major oil companies, it is in the best interest of these same companies to try to retain control by gaining a dominant position in all possible sources. The oil corporations seeking to invest their revenues in the most profitable and least risky areas have determined that they must invest in the most politically safe areas in the world and that they must invest in energy sources for which there will always be a market. They do not want to end up dependent on energy sources which are obsolete.

By gaining control over competing energy sources, companies can possibly hold reserves from development, thus preventing potential competitors from developing them. Thus a particular coal, uranium or geothermal deposit located within an Indian reservation may be leased, not for the purpose of development, but to prevent someone else from developing it. This practice has been documented as occuring on public lands. In 1975, the General Accounting Office (GAO) of the United States government, released a study indicating that federal land administrators were allowing leasees of federal lands to hold land from development even though their own regulations gave them the opportunity to prevent it.[17] A study by the Council on Economic Priorities concluded that, "Holding speculative leases has characterized the western coal movement."[18] Congressman Morris Udall has argued that because of their control over alternative energy sources,

> oil companies are increasingly able to make fundamental decisions about prices and production levels of the energy resources which are primary competitors with oil. If oil companies gain further control over the coal industry, they might well conclude that their overall profits would be maximized by keeping oil prices high and restricting the production of coal.[19]

Horizontal integration, then, is another aspect of monopolization and profit maximization.

D. Vertical Integration

Oil corporations which were formerly producers have integrated forward into refining and marketing so that they can be assured of having

markets for their oil. Oil corporations which were formerly refiners and marketers have integrated backwards in order to insure that they have a steady source of supply. This has been done to reduce the risk of disruption of their operations. Companies wish to control all phases of energy production from exploration to extraction to processing to transportation to marketing. Moves toward increased vertical integration in the uranium industry have been made by General Electric in its purchase of Utah International and Atlantic Richfield in its purchase of Anaconda. General Electric, formerly operating in the areas of uranium conversion, fabrication, and generator manufacturing, has become fully vertically integrated through Utah International's ownership of exploration, mining and milling operations. Atlantic-Richfield, formerly involved in *in-situ* leach mining and fuel fabrication, has become nearly vertically integrated through Anaconda's exploration, mining and milling capacity.

Vertical integration provides companies with a number of advantages. Each stage of processing adds more and more value to the raw material as it becomes a usable product. Controlling each stage of processing gives the company the opportunity to profit from value-added at each stage. It also gives them the opportunity to distribute profits and costs in the stage of production where it will have the most favorable effect on their overall balance sheet. For example, if royalties are computed on the raw material before it is milled, as they are with Indian uranium, the companies have the opportunity of reducing the real value of the uranium at this stage by increasing the milling costs and picking up their profit at the yellowcake sale stage. They are able to lower the amount of royalties they would normally have to pay.

E. Transnational Formation

Companies are generally transnational, multinational operations. They have made a point of spreading their investments over a wide geographical area. The international interests and relationships of the companies are diverse and complex. Exxon, for example, operates 275 subsidiaries in 65 countries.

The advantage of this strategy is that companies can monopolize control over energy reserves which could be potentially competitive with their domestic resources. Companies can buy and sell on privileged terms by shifting operations from area to area, depending on

who gives them the best tax deal, royalty rates and cheapest labor. If an Indian government demands a higher percentage of the profits, a company can counter by simply moving somewhere else.

F. Growth

Companies seek to grow in absolute size. Integrated operations spanning large areas, large numbers of resources and greater numbers of operations have lower administrative costs. Larger size means greater financial resources and allows a company to take more and greater risks. If a smaller company gambles in such a manner and loses, it folds. Big creates bigger. Exxon has revenues two hundred times larger than that of the Navajo government and nearly equal to the revenues of all the OPEC nations combined.

III. CONTROL AND DECISION-MAKING

There is a fundamental conflict between the goals of the energy corporations and the goals of Tribal governments. The energy corporation wishes to improve the profit position of their entire corporate economy. This dictates that they will seek to keep all costs in a particular operation to a minimum. They will employ all resources to keep taxes, royalties and wages to a minimum. This does not necessarily mean that they will try to maximize profits, or the appearance of profits, from a particular mining operation. In the interest of minimizing royalties or taxes, they may post operating costs at inflated rates and depreciate equipment at much higher than actual rates, giving the appearance of little or no profits for that particular operation, but which allows them to pick up their profits, on paper, elsewhere. To aid the corporation, a company also has a goal of control over all decision-making with regard to a single operation. They want to make the basic decisions regarding management, marketing and financing so that they can insure that the operation will fit into their transnational, vertically and horizontally integrated corporate economy. Often this can mean that the growth and profitability of a particular mine will be subordinated to their overall planning.

The decision-making of the corporation thus is made according to the goals of profit maximization of their entire corporate network rather than according to the needs of the local economy where one of their many operations may exist. The goal of the Tribal government, on the contrary, is to maximize economic benefits from a particular mine in order to meet the social and economic needs of the Indian community. At the same time, they wish to minimize environmental, social and cultural costs to the community that result from mining

operations. Companies have clearly shown no consideration for costs that they are not required to pay, such as lung cancer, social disruption, relocation of people and cultural disintegration. Tribal governments have the goal of control over operations in their reservations so that the decision-making and planning can be made on the basis of the Tribe's needs and goals. However, the needs and goals of the Indian people are inherently antagonistic with the companies' needs and goals.

Transnational, monopoly energy corporations have been successful in achieving their goals of profit-maximization. From the point of view of consumers, resource owners and Tribal governments, this has both negative and positive effects. From the positive side, the industry has been very effective in reducing costs. Their multinational, large-scale, horizontally and vertically integrated structures allow them to avoid burdensome and complex exchanges, and allow the industry to operate at lower costs with improved technology and more effective distribution of products. This allows also for increased profits and gives resource owners and laborers a larger share from which they may bargain. Tribal governments will clearly be able to bargain for greater revenues from large-scale high profit corporations than from higher cost small companies.

However, there are also a number of negative effects. In achieving their goal of profit maximization, the energy corporations have been successful in maintaining high prices. Thus, the price of oil and its substitutes are maintained at tremendous cost to consumers. The poorest consumers are hurt the most from high energy costs. American Indian people, as consumers, pay the highest percentage of their incomes for energy costs of any group in America.

In order to maintain high prices, scarcities in energy supplies have been contrived, and some areas have suffered shortages. In order to maintain low costs, energy companies have fought tenaciously to limit royalties, taxes and profit-sharing with Tribal governments and developing nations.

Although the size and scale of the energy industry offers the structure and the mechanisms for efficient energy management and distribution, due to the fact that it is controlled by a small group of people and managed only for their interests, abuses have resulted, and consequently, the transnational corporation is not an efficient vehicle for serving the public welfare.

IV. CONCLUSIONS: STRATEGIES FOR INDIAN PROFIT MAXIMIZATION FROM ENERGY DEVELOPMENT

If Tribal governments decide to deal with energy companies in developing their energy reserves, the possibility of getting a good deal depends on the balance of bargaining power between the Tribal governments and the corporations, not on the good will of isolated corporate executives, nor on public relations statements by the companies. The main factors which determine bargaining power are: economic power; political power; information; expertise; markets; and share of supply controlled by Tribes. After examining the structure, power and size of the energy industry and its ability to work cooperatively within, it is clear Tribal governments do not have comparative political and economic power, and their access to information and expertise is, by comparison, extremely limited. However, market conditions are such that energy resources are in high demand and corporations may be willing to pay a high price for them. In addition, it seems that Indians own a significant enough portion of the energy reserves in the United States to give them some bargaining power.

The recognition of OPEC's success in taking advantage of their ownership of a large portion of the world's oil reserves prompted some Indian leaders to bank on their control of somewhat significant energy resources within the United States. As a result, the Council of Energy Resource Tribes (CERT) was formed, The organization seeks to steer federal policy in a direction which will be beneficial to Indian energy owners, and to improve the bargaining situation of each Tribe with membership in CERT. The Council has already improved the

situation of the energy owning Tribal governments. They have accumulated needed information, begun developing pools of expertise, developed a rapport with the Department of Energy and have begun to provide Indian governments with needed technical assistance. The need for CERT cannot be underestimated. However, CERT is not an OPEC, and does not claim to be, nor is there any possibility that it will become an OPEC. There are two significant differences. First, OPEC members control almost all the world's oil produced for export. Oil is an extremely scarce commodity, and western Europe and Japan are nearly dependent on OPEC for oil. Tribal governments control only 12 percent of the nation's known coal reserves and no more than half of the uranium. Unlike Mideast oil, there are large quantities of coal and uranium in the world. They are not scarce commodities presently. OPEC-like demands may easily be ignored.

Secondly, OPEC members are fully sovereign. Congress cannot declare their sovereignty invalid, nor can the Secretary of the Interior veto their oil agreements. The United States cannot so easily invade the Mideast at will. The balance of world power has changed. However, Congress can dissolve Tribal governments, and the Secretary of the Interior can cancel their leases. These actions have been taken in the past. Tribal governments are solely within the jurisdiction of the United States government, unless Indian people change that relationship.

Indian Tribal governments do not have the OPEC option. However, they do have other options. Partnerships and cooperation with energy companies are options. Tribal governments that have minerals can work hand in hand with energy corporations in maintaining high prices and high profits by bargaining for slightly improved agreements with the companies. Since energy companies make high profits there is clearly a great deal to bargain for.

Tribal governments can try to develop resources on their own or through service contracts. In a service contract, the resource owner owns the entire venture and hires a mining company to extract the resource for a fee. For instance, the Vietnamese government completed such a contract with Norwegian oil exploration interests, which will be paid 3 percent, while the Vietnamese will receive 97 percent of the profits. Similarly, a different company can be hired to market the resource on a commission basis. The Crow Tribal government has been trying to negotiate this kind of deal with AMAX. But many

developing countries have lost money on service contracts. Companies have found a complex of mechanisms which hide the profits in operations as costs and eliminated the profits in the owner's piece of the operation, while preserving the profits for themselves somewhere else in the operation. Such contracts require close monitoring.

Tribal governments can withhold development of their minerals until they can develop them or participate in their development with non-exploitive extraction entities. Energy resources are non-renewable. Once they are gone they are gone forever. If they are developed now and a fair value is not received, the valuable resource will be lost.[20] Implicit in this strategy is to work for conditions where energy resources may be developed without exploitation. Under the present energy corporations, non-exploitative development is not possible.

There are two solutions to the problems of energy monopolies: Break them up or get rid of them. Both of these alternatives are obviously political. Both divesture and nationalization are based on the accepted economic premise that without competition, monopolies are able to act without responsibility to consumers, to resource owning Tribal governments or to the government. As a result, everyone, except the corporations, loses. Divesture, however, is not a good solution to the problem. It merely breaks one huge company into several very big companies. This does not really change anything. This method has been tried when the government broke up Standard Oil into Mobil, Exxon (formerly Humble), SOCAL, SOHIO and Standard of Indiana. Rockefeller, who owned them, was not displeased when he found that instead of owning one huge company he owned five huge companies. Divesture does little to take away the problems of ownership, responsibility and control. Also, divesture could destroy the single aspect of the energy industry that is positive, that is, the efficiency which results from largeness. If it were broken up, the new, smaller companies would have the same high prices of the monopolies though not because of monopolization but because their costs would be higher.

Nationalization of the energy industry by the federal government provides for the best of both worlds. Nationalization is the takeover of monopolies by the government to be run by democratic institutions. The Tennessee Valley Authority (TVA) is an example of such a public enterprise. The large-scale, low-cost advantages would remain, but the high prices and tremendous social costs and resource owners'

exploitation would be ended. Energy development under the industry is planned by a small group of corporate executives, not through any free enterprise capitalist system. If there is going to be planning, and there must be for energy production and distribution, it might as well be democratic and open to public pressure. In particular, Tribal governments would benefit since federal trust responsibility is a reality, while the corporations have no legal responsibility to Indian Tribes.

Nationalized or state owned energy companies have generally been successful. PEMEX, the Mexican owned company, has not only been extremely successful in oil exploration and development efforts, but it has provided enormous social benefits to the Mexican people by marketing petroleum products at low prices, by encouraging Mexican industrial development providing cheap oil, and by financing social services and high wages in the petroleum production sector. This has occurred despite intensive efforts by the energy corporations in the United States to disrupt PEMEX. Other examples of nationalized oil industries may be seen in the socialist countries, with their planned economies, where energy crises have been avoided and cheap energy has been available to their citizens for decades.

Although the nationalization strategy may benefit Indian owners of resources in the long run, the goal of nationalization does little to take care of the immediate needs of Indian communities. Immediate strategy would be to develop some of the energy resources at a slow rate, with high return and Tribal taxation of the corporations, while the political process required for nationalization of the industry by the federal government proceeds. Self-development and use of appropriate technology are possibilities that are being pursued. Development through production-sharing agreements or service contracts could bring in a steady stream of income if Tribal governments were very careful in their negotiations with corporations. However, leases or other royalty based agreements are the worst alternatives of all.

In the long run, Indian communities can benefit the greatest by uniting with other groups whose interest also lies with nationalization and government control. Since Indian people are exploited by energy companies as laborers, consumers, resource owners, and as governments, alliances with analogous groups, such as labor unions, consumer organizations, environmental groups and local governments are in the interest of American Indians.

NOTES

1. Al Gedicks, "Raw Materials: The Achilles Heel of American Imperialism," in *The Insurgent Socialist* (Vol. VII, Fall 1977, No. 2) p. 6.
2. Organization for Economic Cooperation and Development, *Uranium: A Joint Report* (Paris: OECD Publishers, 1976) p. 24.
3. Marian Radetsky, "Metal Mineral Resource Exhaustion and the Threat to Material Progress," in *World Development* (Vol. 3, No. 2 March 1975) p. 128.
4. Charles Lipton, Transcripts from the AIO Seminar, *Indian Tribes as Developing Nations* (Racine, Wisconsin: Johnson Foundation, 1975).
5. John M. Blair, *The Control of Oil* (New York: Pantheon Books, 1976) pp. 55–56.
6. *Ibid.*, pp. 56–63. These agreements are not inclusive, but are the only ones available or obtainable.
7. *Ibid.*, p. 63.
8. Norman Medvin, *The Energy Cartel* (New York: Random House, 1973) p. 99.
9. Blair (1976) p. 51.
10. *Ibid.*, p. 130.
11. United States Bureau of Mines, *Mineral Facts and Problems*, Bulletin No. 667 (Washington, D.C.: United States Government Printing Office, 1977).
12. Federal Trade Commission, Bureau of Competition, *Report to the Federal Trade Commission on Mineral Leasing on Indian Lands* (Washington, D.C.: United States Government Printing Office, 1974).
13. Federal Trade Commission, Bureau of Competition, *Report to the Federal Trade Commission on Mineral Leasing on Indian Lands* (Washington, D.C.: United States Government Printing Office, 1975).
14. John A. Loftus, Special Assistant to the Director of the Office of International Trade Policy, "Petroleum in International Relations," in *State Department Bulletin*, Vol. XIV (Washington, D.C.: United States Government Printing Office, 1946) p. 1.
15. Jack Anderson, *Washington Expose* (Washington, D.C.: Public Affairs Press, 1967).
16. Blair (1976) p. 95.
17. General Accounting Office, *Further Action Needed on Recommendations for Improving the Administration of Federal Coal Leasing Policy*, RED 75-346 (Washington, D.C.: Comptroller General Office, 1975).
18. Council on Economic Priorities, *Leased and Lost: A Study of Public and Indian Coal Leasing in the West* (New York: CEP Press, 1975) Vol. 5.
19. Congressman Morris Udall, *Hearings Before the House Committee on Insular Affairs* (Washington, D.C.: United States Government Printing Office, 1976) p. 36.

20. The problem of non-replenishable resources is particularly important to energy owning Indian communities. Rich mineral resources occur most frequently in a geographical environment which is seldom well-suited to other types of economic activities. The existence of Indian reservations on mineral-rich land, then, is no coincidence. The United States government forced Indian peoples into what they believed were the most barren lands, but which are generally mineral rich. The lack of developed alternatives may be overstated. However, the existence of one "crop" economies, in the form of minerals, such as the Navajo Nation, where up to 90 percent of revenues have come from minerals, often forces Indian decision makers to speed up development to earn needed revenues. Unfortunately, in twenty years, the resources as a source of revenue will be gone. The OPEC countries, which are mostly desert lands, are well aware of this fact, and thus have been cautious with the rate of development. This fact makes development without exploitation essential for American Indians.

THE ROLE OF POLICY IN AMERICAN INDIAN MINERAL DEVELOPMENT

*Lorraine Turner Ruffing**

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I. INTRODUCTION

The history of Indian mineral leasing has been the subject of intense investigation as scholars attempt to identify more precisely the causes of reservation underdevelopment. Nearly all studies reveal that mineral development, rather than being an engine of growth, has resulted in meager economic returns and extensive environmental and social disruption.[1] Minimal benefits and massive costs were the direct result of lack of Indian control and of corporate oriented federal policies.

Confronted with this grim reality, Indian resource owners took action. Individually, several Tribes pressured mining corporations to renegotiate existing substandard leases; collectively, they formed an Indian organization, the Council of Energy Resource Tribes (CERT), capable of giving technical assistance on mineral matters. However, such increased consciousness and action have not yet won for Indian people a fairer share in the value of their resources. The purpose of this study is to review the limited progress of these individual and collective efforts and to suggest additional courses of action for Indian leaders and planners.

A. Record of Renegotiation

In 1973 the Northern Cheyenne Tribe sparked off a virtual revolt against the substandard mineral leases concluded by the federal government on their behalf. Legal research revealed 36 violations of federal leasing procedures in the execution of mineral permits and leases. The Secretary of the Interior was forced to suspend the leases pending Tribal and corporate renegotiations. The Tribe preferred

outright cancellation of the leases before renegotiations began. The Secretary of the Interior refused to cancel the leases. Consequently, renegotiations have been stalled for more than six years.[2]

The Crow Tribe also found numerous irregularities in their leases. They invalidated a lease with Westmoreland Resources and then signed another one raising royalty rates from 17.5 cents to 40 cents per ton. On the basis of the violations, the Crows filed suit in the Ninth Circuit Court to cancel two other leases with Shell and Amax. The Court ruled in favor of the Tribe. Both companies returned to the bargaining table, but their tactics differed considerably. Shell tried to push through a new lease by offering a $200 to $400 "gift" to Tribal members just before the Tribal fair.[3] The Crow Tribe protested such divisive tactics. A tentative agreement was finally reached reducing Shell's leased acreage from 33,000 acres to 7,680, and increasing the royalty rate to 12.5 percent per ton. The royalties, however, will be guaranteed by specifying that Shell pay the royalty on a certain minimum tonnage whether or not the tonnage is mined. The Tribe will also receive a $12 million bonus as well as participate in any windfall profits which occur after Shell attains a target rate of return on its investment. It is not yet known if Shell will be liable for Montana state severance taxes; how the Crow Tribe will monitor production and finances; who will determine profits, and what employment and environmental requirements will be imposed.

Amax, on the other hand, has been actively trying to work out a service contract with the Crow Tribe since November, 1976. Amax' decision to renegotiate in good faith undoubtedly was spurred by the court case and by the fact that Amax hopes to avoid Montana's severance tax by entering a service contract with the Crow Tribe. Under a service contract, the Crows would retain complete ownership of the land and production and Amax would acquire no taxable interest. However, Amax and the Crow Tribe have not been able to agree on the financial terms.

The Navajo Nation, because of its extreme dependence on mineral revenues, which amount to 70 percent of its Tribal income, has not sought cancellation of its existing leases. Approximately 440 million barrels of oil, 2.5 million tons of coal and 75 million pounds of uranium (U_3O_8) have been extracted or are under lease to energy corporations in Navajo land. The Navajos receive 8.5 percent of the market value of their resources while bearing most of the social and

environmental costs.[4] During the 1970s, the Tribal government repeatedly asked the largest coal producers, Utah International and Peabody Coal, to return to the bargaining table.[5] While these companies have entertained Tribal requests, serious renegotiations have not begun. The Navajo Tribe, finding its pleas for equity ignored, chose to enact a possessory interest tax which could capture a sizable portion of the mineral wealth now being siphoned off under inequitable leases. The Tribal right to tax has been contested in numerous lawsuits brought by the energy companies.[6] The Navajos have won two of the cases. Judge Copple of Phoenix ruled that the Navajos were not only immune from suit but also that their sovereign right to tax had not been withdrawn or limited by Treaty or legislation. Judge Campos of Santa Fe dismissed another case because the Tribe is sovereign and immune from suit. Both decisions will be appealed and the question of the Navajo right to tax will be decided during the early 1980s.

The Navajo government has been able to force renegotiations where existing leases were in danger of expiring without going into production and where mineral producers needed removal of rights of way. For example, the Consolidated Coal Company came back to the bargaining table to renegotiate an expiring lease which contained 400 million tons of coal. While the Navajos were able to improve the financial, employment and environmental provisions, the financial terms still fall short of national and international standards. Consequently, the Secretary of the Interior felt compelled to intervene.

Since 1975, a number of Indian Tribes have signed innovative agreements for the development of new mineral deposits: Blackfeet with Damson in 1975; the Jicarilla Apaches with Palmer in 1976; and Colville with Amax in 1978. While these agreements are not without their weaknesses, they contain significant improvements over the standard federal lease. Areas and the duration of contract are limited; the Tribes retain ownership of land and minerals; profit sharing as well as royalties are required; joint management committees to review operations are provided; effective preference is given to Tribal members for employment; and environmental protection is assured.[7] However, a distinction must be made between such entry negotiations and renegotiations.

The Jicarilla, Blackfeet and Colville governments were seeking to develop new deposits. They had not yet formed an excessive depen-

dence on mineral revenues from these deposits. They were, therefore, able to demand innovative terms as the price for development without inflicting any hardships on their people. The situation is quite different for the Navajos and other Tribes. Many of these Tribes sought mineral development years ago as a means of ending their dependence on the federal government. However, mineral development has not generated sufficient revenues to diversify their economies. Whatever meager returns are earned are consumed immediately. Thus, these Tribes have merely exchanged one type of dependency for another. Mineral operations on the Navajo Reservation began almost sixty years ago and the flow of mineral revenues finances Navajo administration and services. It would be difficult to interrupt this flow of services to the Navajo people and almost impossible to halt mining operations and the generation of electricity upon which millions of American consumers in the West depend.[8]

The Northern Cheyenne and Crow Tribes were able to "suspend," "cancel," or "renegotiate" their leases because either the Tribes had not yet formed a dependence on mineral revenues or the leases had not yet gone into production. This does not mean that Indian people are not tempted by potential mineral revenues, especially when big up front bonuses are offered. The poverty of Indian people makes them vulnerable to hasty deals. However, some Indian Tribes have seen that these short run gains are outweighed by long term economic losses and environmental and social costs. Therefore, they are taking a hard look at mineral development.

The cycle of Indian bargaining power is quite different from that of underdeveloped countries in other parts of the world. While Indian Tribes are not yet a match for transnational corporations (TNCs), their bargaining power is relatively greater at the beginning of negotiations.[9] This assumes that Indian negotiators have done their homework, that is, they know the value of the deposit, the history and structure of the corporation and the terms and results of similar agreements.

Prior to 1975 when agreements were still being concluded without such information, Indian bargaining power was low throughout the project life, and one could not speak of a "peak." Today, however, after the agreement is signed, Indian bargaining power begins to decline. It drops even more dramatically once the project is developed and becomes operational. This is in large part due to the current

system of American contract law and Tribal dependence on mineral revenues.

In order to understand the differences between the following two diagrams, these factors should be considered:

- Richness and importance of the ore body.
- The availability of alternative sources of supply or substitute.
- The structure of the mining industry, such as the degree of concentration or what percentage of production or sales is controlled by the big four or eight.
- The position of the particular mining company within this structure.
- The resource owner's ability to finance, develop and market the mineral.
- The resource owner's negotiating skill (a function of full information).
- The ability to inflict losses such as expropriation, denial of credit and markets.

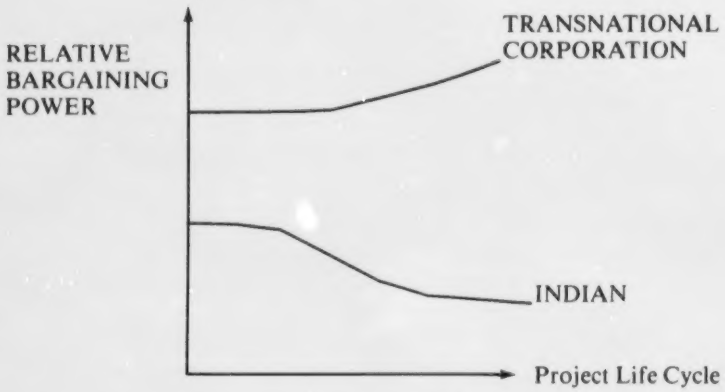

Figure 1: Changes in Indian Bargaining Power Over the Project Life (1975–79)

Third World countries usually find their bargaining power weakest during entry negotiations and strongest after operations begin.

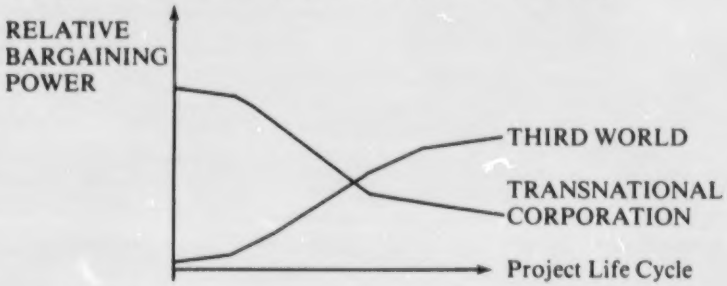

Figure 2: Changes in 3rd World Bargaining Power Over the Project Life

Source: Adapted from W. Stoever, "Renegotiations: The Cutting Edge of Relations Between MNCs and LDCs," in *Columbia Journal of World Business*, Vol. 7 (Spring, 1979).

During entry negotiations, the bargaining strength of the transnational corporation is likely to be quite high since it has the capital, technology and markets necessary to develop the deposit. The corporation's position is further enhanced if the degree of concentration is high within the industry, that is, if there are few other buyers. Once the agreement is concluded and the company has sunk its capital into exploration and development its position in relation to a Third World country weakens. When the project is operational the host country is able to force renegotiations under the threat of nationalization. The terms of many mining contracts were found so intolerable that between 1960 and 1976, three hundred foreign mining and petroleum enterprises were nationalized by Third World countries. Therefore, the threat of expropriation is a real one. In recent years there has been a steady trend away from nationalization toward renegotiation.[10] Of course, if companies do not like the new terms they can retaliate by shifting new investment away from the host country and develop supplies elsewhere. There have also been cases where transnational cor-

porations have made it difficult for host countries to obtain external financing for balance of payments deficits.

American Indian owners, however, have not been able to suspend, cancel or renegotiate leases once they were in production. Without the power to cancel leases unilaterally or to expropriate property, Indian owners have little potential to inflict losses on the corporation. There is thus no incentive for corporations to return to the bargaining table. While the power to nationalize a mining project is probably the single most important factor forcing renegotiation, there are a number of others which could improve Indian post-agreement bargaining power. The ability to use external allies, the news media and other resources to point out the moral rectitude of the Indian position can be helpful.[11] Indian resource owners have yet to launch, either as individual Tribes or collectively, a publicity campaign based on the dramatic contrast between their poverty and corporate affluence.

The refusal of mining corporations to renegotiate is based more on power and principle than on the necessity to keep the lid on Indian royalties. Any increased financial benefits won by the Tribes could be passed on to the final consumer. The mining companies have long-term supply contracts with utilities or sell directly to subsidiaries. The supply contracts frequently contain royalty pass-through clauses. The utilities can absorb these increased costs by hiking their consumer rates. Since the cost of the resource is a small part of the total cost of energy generation, it should have only a marginal impact on the final price of energy. Given that the American demand for energy is relatively inelastic, there will be little response in demand to this marginal increase. Nevertheless, the corporations have refused to return to the bargaining table and are taking refuge in the antiquated concept of "sanctity of contract."

Though the contract concept is still accepted in the United States, international courts recognize that contract revisions are necessary especially in the case of "excessive duration" or "changed circumstances." The courts have no doubt been influenced by discussions in various international forums over certain basic principles of equity which are expressed in United Nations resolutions and in declarations concerning the "New International Economic Order" and "Permanent Sovereignty Over Natural Resources." Unfortunately, these principles have yet to filter down to the United States. For example, U.S. Senator Pete Domenici told the Navajos: "If you make a bad

deal, you should live with it."[12] The fact that the bad deal was entered into by the Bureau of Indian Affairs (BIA) for the life of the deposit under very different market conditions does not seem, in the Senator's estimation, to alter the rules of the game.

Similarly, the Department of the Interior (DOI) has been reluctant to intervene on behalf of those under its trusteeship, even though it is directly responsible for the inequitable contract terms. The energy crisis coupled with DOI's pro-corporate tendencies have prevented it from cancelling the leases even after the mining companies refused to renegotiate.[13] DOI holds to the view that public resources must be exploited by private corporations even though such exploitation has led to speculation, lease concentration, loss of fair market value and environmental degradation.[14] In fact, coal leasing has been in abeyance for eight years (1971–79) as environmentalists battled federal bureaucrats to prevent them from giving public resources to energy speculators on easy terms.

B. Collective Indian Action: Council of Energy Resource Tribes (CERT)

Given the mixed results of individual Tribal action, twenty-five energy resource owning Tribes met in September, 1975, and formed an organization capable of collective action. The ultimate aim of the Council of Energy Resource Tribes (CERT) is to allow its members to control the development of their mineral resources. CERT enables its members to speak in a unified voice on energy matters to federal government officials as well as providing them with information, technical assistance, links to financial institutions and market services. In the past, that voice has often been ignored, distorted or maligned.

The federal government took three years to fund CERT adequately so that it could begin to provide the technical assistance for mineral development that the federal government had failed to provide in the past. CERT was not involved in any important way in drafting or redrafting the 1979 national energy policy even though its members possess significant and strategically located energy reserves. Part of President Carter's energy package consists of an energy mobilization board which would have the power to waive state, local, Tribal and environmental laws which might slow down an energy project. Environmentalists and state governments oppose such a board on the

grounds that it could overturn environmental protection laws. CERT members have even more at stake since it is their resources which could be "mobilized." Navajo Chairman, Peter MacDonald, President of CERT, condemned the Carter administration for ignoring Indians during the Camp David talks: "I don't think the Administration knows that CERT exists. They know about Jesse Jackson, Vernon Jordon, and the President of the AFL-CIO, but somehow, they don't know who owns 20 percent of America's resources. Why not have Indians at Camp David?"[5] When CERT sought advice from OPEC (Organization of Petroleum Exporting Countries) in 1977, it became the subject of intense criticism which continues to this day. The image of CERT became linked with that of the OPEC in the minds of the American public and, unfortunately and unfairly, the OPEC image is a negative one. The American public has been convinced by the news media and by some elected officials that OPEC raised oil prices merely to create an energy crisis. For the average American, the real "crisis" is a long line at the gas station, not resource scarcity. Neither the President nor any scientific body or report have been able to convince the American people that energy resources are finite and dwindling. The Office of Technology Assessment of the United States Congress estimated that if all other countries used energy at the current consumption rates of the United States, the known recoverable reserves of all energy sources would be depleted in 23 years. The American appetite for energy is truly voracious.

TABLE ONE

Per Capita Consumption of Commercial Energy
(kilograms of coal equivalent 1976)

World	2069
Developed Market Countries	6390
Western Europe	4292
United States	11554
Developing Market Countries	427
Africa	200
Asia	334
Latin America	1046

Source: United Nations, UNCTAD Handbook of International Trade and Development Statistics, 1979.

The average American consumes 11,554 kilograms of coal equivalent annually, which is 50 times African consumption; 30 times Asian consumption; 10 times Latin American consumption. The United States, with 6 percent of the world's population, annually consumes 31 percent of the world's energy resources.

In an interview following the June, 1979, oil price rise by OPEC, the Saudi Arabian oil minister, Sheikh Ahmed Zaki Yamani, criticized wanton American habits:

> To this day there are still many Americans who would think nothing of jumping into a big gas guzzler on a whim or because they're unhappy and want to drive around for an hour or two . . . Most American cities are a blaze of lights at night. Empty buildings are illuminated. In the summer, offices and homes are too cold, and in the winter, too hot. All these profligate habits have to stop. It's all too riduculous for words.[18]

United States oil imports have increased from 14.6 percent in 1960 of total oil consumption to 46.2 percent in 1978, creating a chronic balance of payments problem, weakening the dollar and causing speculation in gold. In short, the American energy appetite threatens to plunge the already shaky international monetary system into even greater chaos. Yet the United States government has not adequately educated the public of the crisis, so the American people have neither comprehended nor admitted their responsibility for the crisis. Instead the finger is pointed at others—usually OPEC and sometimes CERT.

While OPEC has continuously raised the price of oil to reflect impending scarcities and the cost of alternative energy sources, these price rises have been eroded by inflation. OPEC oil is paid for in dollars which continue to shrink in value. Yet OPEC is still perceived to hold the United States in a death grip and this negative image, to a degree, is transferred to CERT. Again quoting Senator Domenici, ". . . the creation of CERT will make some people think that the Indian tribes are trying to twist the country's arm at the time when it needs as much domestic energy as possible." No burden is placed on the American consumer, especially corporations, to conserve energy or on the oil companies to invest in exploration, production and refining.

The reality is that CERT, while it is a producers' association, could

never exert enough pressure to raise prices as has OPEC. First, CERT members possess a variety of energy resources (oil, gas, coal, uranium), not just one scarce resource; second, CERT members do not possess enough of any one of the resources to have more than a short-term regional effect on price.

TABLE TWO

Indian Share of Proven Energy Reserves*

Mineral	*Year*	*U.S. Total*	*Tribal Total*	*Tribal Share*
Coal (all) in billion tons	1978	1730.9[a]	135.4[a]	8 percent
Coal (strippable), billion tons		485.8[a]	102.7[a]	21 percent
Western strippable coal		370.6[a]	102.7[a]	28 percent
Oil, billion barrels	1979	28.0[b]	n.a.	3 percent[c]
Uranium (tons U_3O_8), Reserves, billion tons	1979	920,000[d]	105,000[e]	11 percent

Sources: (a) C. Kolstad and R. Pendley, *Policy Issues Concerning Development of Energy Resources on American Indian Tribal Lands* (Los Alamos, NM: Los Alamos Scientific Laboratory, 1978); (b) P. Nulty, "Shale Oil is Braced for Big Role," in *Fortune* (September 24, 1979); (c) Americans for Indian Opportunity (AIO), *Indians and the Energy Research and Development Administration* (Albuquerque: AIO, 1977); (d) M. Searle, *Energy Resources for Tomorrow* (Electric Power Research Institute, 1979); (e) "Mine Development on U.S. Indian Lands," *Engineering and Mining Journal*, January, 1980.

*There is no agreement on the extent of Indian minerals. In 1977, Americans for Indian Opportunity estimated that Tribes own 33 percent of western low sulfur coal, 3 percent of U.S. oil reserves and 25 percent of U.S. uranium production. CERT estimates 15 percent of uranium production. CERT estimates 15 percent of U.S. coal reserves; 50 percent of uranium and 4 percent of oil resources.

The real importance of Indian reserves does not lie so much in absolute size but rather in quality and location. For example, most Indian coal is strippable at low mining cost and has low sulfur content. It is strategically located near western and southern markets. Apart from ownership of energy resources, Tribes may influence energy development in other ways. They can influence regional environmental quality by promulgating their own environmental protection standards. They can grant or withhold needed rights of way. They can slow down the pace of energy development in the arid West by limiting regional water supplies.[17] Indian water rights have been called their "wild deuce." CERT has not yet emphasized the crucial relationship between water rights and energy development.

While Indians may be able to affect the pace of energy development, they cannot have the impact of OPEC actions. CERT is in the unfortuate position of having the reputation without being able to fully participate in the game. There are, nevertheless, important functions which OPEC performs which CERT is perfectly capable of imitating. A part of OPEC strength derives from its willingness to share among its members information on corporate operations and policies. OPEC members have found this function to be especially important because of the general unwillingness of oil companies to supply data. For example, OPEC shattered the corporate code of conduct on contract secrecy and published nineteen oil contracts. OPEC did a comparative analysis of its members' posted prices, royalties, taxes and transit and port duties, guarantees and timing of payments and other economic benefits offered to host countries. The best terms were then offered to the members as guidelines for future negotiations. One expert has commented:

> Over the long-run, the information sharing role of OPEC may turn out to be the function most amenable to emulation and perhaps the most important to emulate. For thirteen years prior to 1973, the data sharing and collective bargaining function of OPEC distinguished the negotiation and administration of petroleum production arrangements from the less successful contractual ventures of developing countries in other industries.

Even though one explicit aim of CERT is to exchange information concerning all aspects of energy development, there has been a reluctance among members to do so. If CERT members do not begin to share some secrets in the area of mineral agreements and corporate dealings, they may miss out on the one thing they are certain to gain from their organization.

One promising development is the endorsement of eighteen essential petroleum contract provisions by CERT directors. The provisions contain criteria for the length of agreements, work provisions, the handing over of geological data, employment preferences, royalties and profit-sharing which would allow the Tribes a fair return while insuring their control over the speed and impact of development. CERT has thus alerted the American mining industry as to the minimum demands of Indian resource owners.[19]

II. AGENDA FOR ACTION

The individual and collective Indian efforts reviewed here would be insufficient even if they are successful. New and better agreements will not increase financial returns or control unless they are enforced. CERT might win national sympathy for the Indian cause, influence national energy policy and give technical assistance to its members. However, CERT cannot run Tribal energy projects on a daily basis. Whatever gains are won on an individual tribal or collective basis must be consolidated by coherent internal Tribal mineral policies and their implementation.

A. Tribal Goals

The goal of any mineral owner whether Tribal, federal or Third World, is to maximize the benefits and minimize the costs of mineral development. To achieve this the government must have a mineral policy. Without a policy, project decisions are made on an *ad hoc* basis, and the development of the mineral sector is haphazard.[20]

The first step in the formulation of a policy is the statement of the goals of mineral development. Among the most frequently heard Indian goals are the assertion of Tribal sovereignty over resources, increased revenues, employment, training, diversification of the economy, the protection of the environment and the preservation and growth of Indian cultures. Obviously, not all these goals can be achieved at once. Rapid and large-scale development will increase income and employment, but at the cost of environmental and social disruption. Only Indian people can decide how much development they want and how fast.

B. Tribal Policies Consistent With Tribal Goals

1. Tribal Sovereignty over Resources

Tribal sovereignty over natural resources depends on having complete control over these resources. This means retaining complete ownership over mineral wealth. Non-Indians must be prevented from obtaining any ownership interest in the land, mineral estate or production as now happens under standard leases and some conventional joint ventures. Once outsiders obtain such interests it is difficult to control development. Any limiting action is usually viewed as "undue" interference with property rights. The fact that mining companies acquire an ownership interest in the land and production allows the states to levy property and severance taxes. These taxes could be avoided if the non-Indian developers had no "taxable" interest. Tribes could increase their "take" either in the form of Tribal taxes, royalties or some other kind of payment.

A Tribe can retain sovereignty over resources by ending leasing and by using other forms of agreements in which the corporations acquire no ownership interest. A Tribe might issue a declaration of permanent sovereignty over natural resources, which states that the resources belong to Indian people for their use and benefit. The declaration could forbid entering any type of agreement which would compromise Indian ownership rights or deny Indian people the use and benefit of the resources. The declaration might also require that any resource development be carried out under Tribal law, codes and regulations and that any disputes with outside parties must be settled by Tribal courts.

Sovereignty can be best maintained if resources are developed by the Tribe itself. The declaration might give the responsibility for mineral development and management to a Tribal enterprise. Since most Tribes lack the necessary capital and technology to form mining companies, mineral development will most likely be undertaken by outsiders in the short-run.

Most of the suggestions contained in this study pertain to the case where resources are developed by non-Indians even though this is definitely a second best solution. The Tribal mineral development corporation could control the activities of outside developers through

permits and service contracts. A permit would merely authorize certain non-Tribal operators to carry out well-specified operations, such as reconnaissance and exploration, under the control of the Tribal mineral development corporation. Under a service contract, operators would assume responsibility for mine development, procurement, operations, financing and marketing. The operator would be a "contractor" not a concession holder. The operator would be reimbursed for costs and could receive a fixed fee or graduated fees based on production, sales or profits. Services could be paid for in cash or kind. A Tribe could develop the capability to run a Tribal mining company by insisting that service contractors train Indian people in all job categories, particularly in the professional ones. Some developing countries allow foreign firms to operate the venture during its early years but require them to phase out in favor of national managers. Financing for a Tribal mining company could come from the end-users, such as utilities, or from production payments from commercial banks.

2. Policies for Increasing Revenues

Minerals are capital assets which can produce a stream of income. The goal of a mineral owner is to maximize the stream of income which the assets will yield. The income can be maximized if the minerals are extracted when market conditions are favorable.[21] Indian owners can maximize mineral revenues only if they control the timing and methods of extraction. This can be done through mining codes, mining plans, and a mineral development corporation which will be described in subsequent sections.

The economic value of a deposit is equal to the income stream it yields.[22] Weak Indian bargaining power has allowed energy corporations to capture most of the value of Indian deposits. Two major tasks confront Indian Tribes that own energy resources: First, to negotiate or renegotiate existing leases; and, second, to institute a fiscal system capable of capturing the economic value of their deposits. In both instances the Tribes must determine the economic value of their deposits beforehand. Tribes must develop the expertise necessary for managing or monitoring operations.

In general, the Tribes should never decide on the form of an agreement or its terms until the value of the deposit is known. The value can be determined only after evaluating geological, technical and market

data. In the past, the corporations have had a monopoly on geological data since it was they who did the exploration. The Tribes could form exploration teams to provide the necessary geological information. Such teams might be financed with federal funds as part of an energy policy to develop additional energy sources. Tribes must also build their technical capability to evaluate data. This means instituting a data base management system and designing appropriate methods for social benefit-cost analysis.

The financial terms of any agreement should be comprehensive, flexible, equitable and subject to periodic review. Some new agreements institute a comprehensive system of rents, royalties, profit-shares and taxes. Such a system permits the resource owner to collect a stable income through rents and royalties as well as any excess profits through taxes and profit-sharing. The system allows the developer to earn a reasonable rate of return on invested capital. The financial terms are usually subject to periodic review, such as every five years. Flexibility and periodic review insure that neither party takes undue advantage of the other and in the end contribute to the stability of the venture.

3. Policies for Employment and Training

Extractive activities are by nature capital intensive. Therefore, whatever jobs are generated must be guaranteed through Indian preference in hiring and training. Most Indian agreements contain relatively weak employment clauses. Employers are usually required to give preference to Indians "in all positions for which they are qualified and available" under existing agreements. However, the employer is the ultimate judge of the meaning of "qualified." In the case of the Navajo Generating Station, the management has total discretion in defining employment qualifications. If they feel the "quality of work" of local Navajos is unacceptable, they may hire non-Navajos. Consequently, Navajos comprise only 33 percent of the station's work force compared with 85 percent on other Navajo energy projects.

In some cases, clauses in agreements exempt technical and professional positions from Indian preference. They rarely give preference to local Indian labor. Small communities do not benefit from mining projects because the local labor force lacks appropriate skills. The jobs are given to outsiders and their influx contributes to social disruption.

Companies should be required to set up training courses in advance of operations so that local people will have the necessary skills. Indian quotas and timetables for meeting the quotas should be established for all job categories. Non-Indian professionals should be given short fixed-term contracts and should be required to train Indian replacements. The entire management should be phased out in favor of Indian management as early as possible during the lifetime of the project.

4. Policies for Economic Self-Reliance

Economic self-reliance is a strategy to develop Tribal economies so that they can support Indian people. Such a strategy would result in lessening Tribal dependence on outside capital, technology and consumption products. Self-reliance is increased by investing in local productive enterprises which satisfy local needs. Third World countries are attempting to become more self-reliant by diversifying their economies. They are relying on mining to broaden their economic activities. The strategy includes requiring foreign operators to buy domestic inputs and to use local subcontractors. Some countries reserve a small portion of royalties for a business development fund to finance local shopkeepers. A business development fund would enable Indian businessmen to respond to local mine demands. Drilling, waste disposal and reclamation could be performed by local subcontractors.

Foreign firms are required, in some cases, to study the feasibility of processing minerals locally. In addition, they are given tax breaks for reinvestment in processing activities. To capture a share of value added to minerals by processing, a Tribe should always preserve the option to take its share in kind. For example, if a Tribe took its royalty in oil, it could either realize a higher sales price as a small seller or have the oil refined for resale by Tribal gasoline stations. Tribal coal could be processed in a Tribal generating station serving Tribal and regional energy needs.

Mining can also diversify the Tribal economy by generating the funds to invest in productive enterprises. The Tribal government should earmark a certain percentage of mineral revenues for an economic development fund. The percentage should be sufficient to allow the Tribal government to create a stock of productive assets which can produce an income stream comparable to that generated by the original mineral resources. Only through such reinvestment will the Tribe be able to provide continued income and employment when the minerals are exhausted.

5. Policies to Minimize Environmental and Social Costs

Indian land, water and air must be protected from discharges and emissions of energy producers. A balance must be struck between development and environmental protection. The most effective way to protect the environment is to set effluent standards and penalties and let industry choose the technology to meet them.[23] Adequate technology generally exists to control pollution. However, owners of mines and mills and power stations are not willing to use a technology which reduces their profits. Setting effluent standards and penalties will force them to internalize these costs by using the best available technology to control pollution. Performance bonds and insurance should also be required in the case of non-compliance or accidents. By setting performance standards, Tribes can control mining methods, waste disposal and reclamation.

There is growing opposition among Indian people to mining because they have enjoyed few of the benefits and suffered most of the negative consequences. If mineral policies and agreements, however equitable and innovative, continue to be worked out without local participation, they will be of little use in the face of hostile communities. Indian people complain that energy companies and their employees have destroyed their property, livestock and livelihood; desecrated sacred areas; and failed to reclaim the land in a timely fashion. With community participation, mine development can be planned so as to minimize the disruption of traditional activities, especially in cases where older residents have no alternative means of earning a living. This can be done by considering community preferences concerning the scale, timing and sequence of mining activities as well as the location of access roads, waste-dumps, wells, impoundments and discharges of water.

Annual land rents should be collected to compensate for the various socioeconomic costs borne by the surface users. Present methods of compensation are based usually on the value of livestock or grazing permits, on the replacement value of property, on the expense of moving and reestablishing a household. However, lump-sum payments do not take into consideration the fact that if people are required to liquidate their herds, they are giving up an income stream. The lack of savings' institutions and habits makes it impossible for traditional In-

dians to convert these lump-sum payments into other earning assets. Payments should be made in the form of annual annuities and reflect what income and life style would have been enjoyed. When surface users are permitted to return to their use areas, they should be given a lump-sum payment sufficient to allow them to replace their flocks and property. If they die before they are able to return, the heirs should receive such payments.

Compensation should also cover the cost of providing alternative livelihoods or restoring the relocatees to their former productive lives. This would involve rehabilitative education and counseling. People should be allowed to choose between rehabilitative training and the system of annual annuities. Of course, lump-sum payments, annual annuities and rehabilitative training cannot adequately compensate the older, traditional Indian people for the loss of their lifestyle. Every effort should be made, through active community planning, to minimize the disruption they face. Ideally, they should be relocated within or near their original communities.

Relocation and loss of livelihood are not the only shocks which the community members must absorb. Mining usually brings an influx of outsiders either as daily workers or temporary residents. Such an influx strains the already inadequate roads, housing, water, educational, health and police facilities, creating considerable resentment. It might be preferable to limit any influx by giving job preference to residents. Since many residents in rural areas lack the necessary job skills, it would be necessary to give them advance training if local preference is to be meaningful. Without local job preference, mining will not bring about local development, but merely a daily or short term influx of skilled migrants.

In Botswana (Africa), Papua New Guinea (South Pacific), Australia and Saskatchewan (Canada), indigenous communities share in mining royalties. The Badya Commission, which studied the impact of uranium development on Canadian Indians, reasoned that since Northerners will bear most of the social costs associated with the development of uranium, it is only fair they receive part of the royalty. Some percentage of royalties could be deposited in a community development fund to help local businessmen meet the increased demand for retail and wholesale goods. Otherwise border towns will capture these increased demands.

C. Implementing Mineral Policies

Once policies and strategies have been selected which will attain Tribal goals, they must be implemented. Elsewhere in the world, mineral policies are usually implemented through written codes, through the actions of government mineral development corporations and through the specific terms of mining agreements.

1. Codes

There may be questions concerning the need for more regulation or codes since there already exist numerous federal laws which govern Indian leasing, mining, environmental protection and reclamation. These are *ad hoc* regulations worked out on a piecemeal basis to remedy specific deficiencies. The federal regulations do not form part of a comprehensive mineral policy designed to accomplish Indian goals. Tribal officials and mineral experts have criticized these regulations as being vague, poorly enforced or simply ignored for the benefit of private interest groups.[24]

Whether a Tribe should write its own mineral code to implement its policies probably depends on the extent of its mineral deposits. If it has only a few deposits, its policies can be embodied in well-written mineral agreements and enforced by a Tribal mineral development corporation.

However, Tribes with extensive mineral deposits will find that written codes have a number of inherent advantages. First, the enforcement of a good Tribal code is an assertion of sovereignty. Second, written codes can systematically guide and control mineral activity. Third, written codes set guidelines for non-Indian developers. As such, they remove the uncertainty about the rules of the game and consequently create an atmosphere of stability and predictability which is conducive to investment. Fourth, codes can diminish the number of issues which must be dealt with during negotiations, thus reducing the risk of oversights, and allowing the parties to concentrate on the unique aspects of each mining project. Fifth, codes may be amended unilaterally without going back to the bargaining table.

Codes cannot completely eliminate the need to negotiate separate agreements when outside developers are involved because each deposit is different and the appropriate financial terms must be decided. Third World countries, however, have found that codes are a less expensive

way of controlling corporate activities than, for example, entering into joint ventures in which they are required to put up half the costs.[25] Among the issues which must be dealt with in codes are mining, fiscal systems, accounting, labor, environment and social questions.

a. Mining and Reclamation Code

The mining code should establish procedures for reconnaissance, exploration, mining and reclamation. The code should incorporate the idea of *staged development*, that is, no activity is automatically entered into without the necessary information, evaluation or approvals.[26] For example, an exploration permit could not be automatically converted into a mining lease upon discovery of a commercial deposit. The company would be required to furnish exploration data. Such data would then be used by the Tribe to decide whether to proceed with development. In order to encourage exploration, the holder of the permit could be given the right of first refusal or a specific negotiation period.

The code should establish area limits, time limits, minimum investment for each type of activity. Before operations of any kind began, companies would be required to submit detailed plans for Tribal approval. The code should specify the exact content of the plans, procedures for revisions, penalties for non-compliance. Through the use of mining and reclamation plans, the Tribe could control mining and reclamation techniques as well as the rate of production and deposit recovery. The Tribe, when approving the plans, could specify the techniques and rates that will maximize Tribal returns. No surface disturbance activity should be permitted until the Tribe approved the reclamation plan. The code should require the monitoring of operations. Companies would be required to submit monthly and annual data on all activities, discoveries, production, costs, sales and use of Tribal resources, as well as any interpretation and analysis of such data. Operators would be required to furnish performance bonds and buy accident insurance. In addition, the operator should pay the costs of physical and financial monitoring.

b. Fiscal Code

The provisions of the fiscal code should institute a comprehensive, flexible and equitable system which is capable of capturing the eco-

nomic value of Indian deposits. The system could consist of rents, royalties and taxes. A royalty is a payment for the right to extract and sell ore. It is usually a charge levied on production, though sometimes it is levied on profits. It should be designed so that any increase in ore value accrues to the owner.[27] Current Indian royalties are either per unit royalties (cents per ton) or percentage royalties (percentage of selling price). Neither type allows the Tribes to capture all the increase in value due to increase in market prices. In addition, the per unit royalty encourages high-grading of the deposit because the royalty payment is the same for high or low grade ore. Profits can therefore be increased by mining only high grade ore. If this type of royalty is set too high it decreases the rate of recovery and converts ore into waste rock.

A third type of royalty, used in Canada, Botswana, Ghana, Uganda and Zambia, takes a fixed or graduated percentage of mine income (mine profits). This royalty is favored by many, including industry because it is simple to calculate, takes into account ability to pay and does not encourage high-grading.[28] Mine income is calculated by subtracting certain identified costs such as annual operating costs, development costs and amortization from gross revenues. Gross mine revenue is computed by using FOB market price and production sold or deemed to be sold. By using production "deemed to be sold" the producer is prevented from stockpiling. There are many advantages to combining a fixed percentage royalty based on gross sales or production and a graduated royalty based on profits. Such a combination insures a certain amount of income as well as allowing the owner to capture excess profits if and when they occur.

There are three taxes which are usually applied to minerals: Severance taxes, property taxes and income taxes. Severance taxes are enacted by no less than thirty states of the United States. A severance tax is a tax on production and is much like a royalty in that it can be levied as so many cents per ton or as a percentage of sales. The severance tax is, therefore, subject to the same criticism as the per unit royalty or percentage royalty. Like the per unit royalty, the per unit severance tax would encourage high-grading, decrease the rate of recovery, shorten the life of the mine, drive out marginal mines, and fail to capture the increase in market price. The percentage severance tax would also fail to capture all the windfall gains and would defer production into the future.

The second tax which has been used extensively in mines in

Michigan, Minnesota, Wisconsin and Arizona is the mineral property tax. The tax is usually levied on the "value" of the mine. The calculation of the value of the mine requires a knowledge of ore reserves, the annual production over the life of the mine as well as a subjective assumption about the proper rate of return which should be used to convert future net income to present value. Because of these requirements, the tax is extremely difficult to calculate and has led to numerous court cases contesting mine valuations. The property tax encourages rapid depletion of ore reserves; the mine operators literally try to "mine out" from under the tax. These problems have caused Wisconsin authorities to abandon the mine property tax for one on mine income. Such a tax is simple and easy to assess. The mine income tax has a schedule with multiple and progressive brackets. Progressivity is important since it allows the state to capture windfall gains but does not drive out marginal producers.

c. Accounting Code

In order to insure that profits are accurately reported, detailed records of production, costs and sales must be required of operators. The Tribes must also specify that procedures are to be used for allowing deductions. Among the items which must be closely watched are:

- Deductions for interest payments on loans since such deductions can diminish the amount collected in taxes or profits; some countries set limits on debt-equity ratio.
- Charges by affiliates for patents, technology, overhead expenses in the home office, technical assistance, marketing services; some countries disallow any cost incurred outside the host country.
- Salaries and expenses of management.
- Deductions for rents and royalties; they are usually treated as an operating cost, not as a tax credit.
- Deductions for depletion are not allowed because the ore belongs to the host country.
- Expensing or depreciation of exploration and development costs; usually exploration costs are expenses immediately; development costs can be expensed over time; the more rapid the expensing, the larger the corporation's cash flow and the smaller the government's taxes or profit share.
- Carrying forward of losses.
- Contingency accounts.

d. Labor Code

To insure Indian preference in hiring, the code must specify the minimum percentage of Indian craftsmen to be employed in each job category as well as wages, hiring, promotion and termination procedures. To attain Indian preference in higher echelon positions, the companies must be required to establish training programs which include not only on the job and formal class education at the mine, but sending a certain number of Indians to technical and professional schools. The number of Indian professionals could be increased by insisting that non-Indians be given short fixed term contracts and that apprentices be trained simultaneously. Information on employment is necessary to evaluate, compare and enforce Indian preference. The code should require standardized monthly reports which include Indian and non-Indian employees, first by job category, then by geographic origin, training promotions. Wages, salaries, fringe benefits, compensation for officers should be reported on an annual basis. The code might require preference in hiring and training for local people. people.

e. Environmental Code

The code should establish certain performance standards and penalties adequate for protecting Indian land, water and air. Federal emissions standards are insufficient because they offer inadequate protection from old source emissions or are set without regard to plant size, meteorology, existing ambient air and water quality and terrain.[29] Federal standards could be regarded as a minimum and then be adjusted upward to take into account local conditions. The code should require performance bonds and accident insurance.

f. Social Impact Code

The socioeconomic costs of mining could be mitigated by allowing local communities to participate in planning mineral development. Of course, a balance must be struck between community desires and Tribal needs. The social code should designate an organization through which information can be disseminated and community decisions can be taken.

The organization would help plan mine development so as to minimize disruption and relocation. When they are unavoidable, the

local organization along with Tribal authorities would determine the proper level for annuities and lump-sum payments and provide for rehabilitative training. The community organization should be responsible for planning the expansion of infrastructure as well as controlling the influx of non-local workers. The community organization should be directly involved in managing the local business development fund.

2. Mineral Development Corporation

Codes alone, no matter how well written will not guarantee that Tribal goals will be attained. The codes must be enforced. In the absence of written codes, Tribal policies must be translated into action by some Tribal entity. One expert on Third World mining activities states that the "most promising" avenue for controlling mineral development is through the creation of a competent and semi-autonomous state enterprise staffed by technicians.[10]

The task of mineral development must be centralized into one well staffed entity which can first interpret Tribal policies and enforce Tribal codes; second, plan and coordinate development by collecting and evaluating information; third, operate or monitor mineral projects; and fourth, reinvest some portion of revenues in future mineral development.

Most Third World countries have established state mineral corporations to develop their resources. The state corporation's main object is to search and develop minerals under effective national control and to maximize the final benefits from their eventual exploitation. State mineral corporations have a dual nature: In their commercial and managerial aspects, they resemble commercial enterprises, but in so far as they fulfill public tasks, they are subject to government control.[11]

The model of the public corporation could be adopted to serve Indian needs. A tribal corporation could be formed under Tribal law as a separate legal entity vested with the responsiblity for developing Tribal minerals. Board members could be appointed by the Tribal chairman subject to the approval of the Tribal Council. While members would be accountable to the Councils, they would be free to run operations efficiently. The Board members should be chosen for their technical knowledge of the mineral industry and their qualifications should be established by statute. It might be preferable to recruit min-

ing experts with experience in the Third World. They will be better able to comprehend the development problems which Indian Tribes face. They will also have a knowledge of the new and innovative agreements. Indian board members should have at least a college degree in the physical sciences, in mining or petroleum engineering or in mineral economics and experience in the mining industry. To have less than imaginative, innovative and well trained board members is to betray future generations.

The first board must set up the corporation, take over the management of existing mineral activities, and design a plan for the orderly and optimal development plan for remaining resources. To design a mineral development plan, they must discover and evaluate potential resources as well as have a good idea of the future market for these minerals. For each individual project, the board must decide the optimum size and rate of development, investment, financing, procurement and marketing. They must constantly monitor the project to insure targets are being met in terms of production, recovery, cut-off grades, cost control, revenues and environmental protection. The structure of the mineral development corporation would, of course, be guided by these functions.

TRIBAL COUNCIL
Mineral Development Corporation
Board
Manager

Survey/ Inventory/ Exploration/ Data Base Management	Engineering & Financial Evaluation/ Planning	Operations Monitoring (Physical)	Financing Collection/ Monitoring (Financial)	Liaison with Tribal Government/ Legal Counsel/ Communities
		Tribal Mining Company		

The staff of the corporation must be highly professional. Tribal scholarships should be earmarked for the study of geology, mining engineering and economics so that Indian professionals with the appropriate skills will be available. Possibly, Tribal loans should be given instead of grants, which could be repaid either in cash or in service. This would both maintain educational funds as well as lessen the brain drain. Special training courses could be offered by Indian col-

leges to train lower level professionals such as statisticians, field monitors and surveyors.

While the mineral corporation would be a semi-autonomous agency capable of planning and executing mineral development, the Tribal Council would be able to control the corporation in a number of ways. First, it would approve or reject all specific mineral projects after the board submitted feasibility and impact studies. If the project were to be carried out with outside developers, the Council would have to approve the terms to be included in the mining agreement. Second, the Council would appoint or approve the board of directors. Third, while all mineral revenues would be collected and verified by the mineral corporation, it would be reimbursed only for administrative costs and operating expenses. The Tribal Council, as the major shareholder, would receive all income after expenses and would decide what portion of that income would be retained by the mineral corporation for reinvestment and what portion would go to the Tribe as dividends. The Tribe would bear the responsibility for reinvesting these dividends in other non-depletable productive assets.

3. Mineral Agreements

Because Indian Tribes lack the capital, expertise and markets necessary for mineral development, they have little choice but to enter mining agreements with corporations. The terms of such agreements depend directly on Tribal bargaining power which was reviewed above.[12] There is a difference between bargaining power and negotiating skill. Bargaining power depends on a number of factors besides negotiating skills, such as industry structure and host country command over resources. Though Indian Tribes have little control over some factors, they can improve their negotiating skill. Suggestions have been given throughout this paper. In summary:

- Negotiations on financial terms should take place after the Tribe has determined the value of the deposit based on evaluations of geological, technical and market data.
- Negotiators should know with whom they are dealing; they should have complete corporate histories including financial records, past performance, terms offered in similar agreements.
- Negotiators should discuss only those Tribal proposals

which would attain Tribal goals, previously specified in the mineral policy.

- Cost-benefit analyses and sensitivity analyses should be done for all Tribal proposals (draft agreements), so that negotiators know how much they can safely compromise on any point.
- The Tribe should have a seasoned team of negotiators who are well informed, are involved on a daily basis in mineral development, are committed to Tribal goals and who are able to work together.

Indian Tribes can improve their negotiating skills by utilizing the services of the Council of Energy Resource Tribes (CERT). Tribal officials can design innovative agreements only if they periodically review trends in recent international and national agreements. Only then will they know what terms transnational mining companies have accepted elsewhere. CERT could easily keep an archive of mineral agreements, collect corporate histories and hold workshops on data base management and evaluation, on cost-benefit analysis and on negotiating techniques. The negotiating teams, which largely should be made up of Tribal members, could be reinforced by CERT experts.

4. Formation of Indian Professionals

Whatever terms are obtained must be enforced. Increased control and revenues not only depend on carefully worded terms but also on the effectiveness of the mineral development corporation and the ability of Indian professionals to implement the agreement. Third World countries have found that even though the new agreements gave them seats on the executive boards or on joint management committees, they were still unable to control operations. Their representatives did not have the knowledge and experience necessary to appraise or scrutinize the operations of the enterprise. Some directors owed their appointments more to political patronage than to their own expertise. The following story is revealing:

> A government director, after his return from a board meeting of a joint venture held in London, sent an appreciative note to the English managing director of the company for the "wonderful cuisine" at the directors' lunch. He was oblivious of the fact that after that superb lunch the English director

got them to revalue the assets of the company resulting in very substantial tax benefits for the company.[33]

The effectiveness of the mineral development corporation will depend on the competence of its staff. To increase the number of Indian professionals, Tribal scholarships, as well as special training courses are important. CERT could also train a number of Indian professionals either through intern programs or workshop sessions. Only in this way will a sufficient number of Indian professionals be available to implement codes, to manage mineral development corporations and to enforce the terms of agreements. The formation of such professionals is a *sine qua non* for successful mineral development. It has been suggested by some that until Indian mineral development can be undertaken by Indians for Indians, it should be postponed. Perhaps this may be the only way to assert full control over mineral development and end the present cycle of underdevelopment and dependence. Certainly, the formation of Indian professionals is a prerequisite for a successful mineral development policy.

III. CONCLUSION

This paper has reviewed the limited progress of Indian Tribes in obtaining a fairer share of their mineral wealth. Many obstacles militate against them in their struggle. Principal among the barriers are the power of the transnational corporations, the system of American contract law, the indifference of the federal government, American misconceptions about the nature of the energy crisis, as well as Indian dependence on mineral revenues and their reluctance to share information among themselves.

The negative forces can be mitigated by effective use of the news media, by pooling information, and most importantly, by the formulation of a coherent mineral policy at the Tribal level. A comprehensive policy will give focus to the heretofore scattered attempts to increase Indian income and control over mineral development. Only a coherent policy will maintain whatever gains are made at the bargaining table or on the national level.

NOTES

1. Bureau of Competition, *Report to the Federal Trade Commission on Mineral Leasing on Indian Lands*, (Washington, D.C.: United States Government Printing Office, 1975); J. Cannon, *Leased and Lost* (New York: Council on Economic Priorities, 1974); J. Cannon, *Mine Control* (New York: Council on Economic Priorities, 1978); United States General Accounting Office, *Indian Natural Resources, Part II: Coal, Oil and Gas* (Washington, D.C.: United States Government Printing Office, 1976; L. Ruffing, "Navajo Mineral Development," in *American Indian Journal*, Vol. 4, 9 (September, 1978); R. Trosper, "American Indian Mineral Agreements: Literature Search and Reform Proposals," unpublished study for the American Indian Policy Review Commission, May 1976; R. Dunbar Ortiz (ed.), *Economic Development in American Indian Reservations* (Albuquerque: Native American Studies, University of New Mexico, 1979).

2. N. Owens, "Can Tribes Control Energy Development?" in J. Jorgensen, et. al., *Native Americans and Energy Development* (Cambridge: Anthropology Resource Center, 1978); S. Chesnut, "Coal Development on the Northern Cheyenne Reservation," Unpublished paper presented to the United States Commission on Civil Rights at Denver, Colorado, November 2-3, 1978.

3. Cannon, *Mine Control*, p. 83.

4. L. Ruffing, *A Mineral Development Policy for the Navajo Nation* (Window Rock: Navajo Nation, 1980).

5. In 1977, Utah and Peabody mined approximately 18 million tons of coal which had a market value of $4-14 per ton. Yet the Navajos received only 25-37.5 cents per ton.

6. According to the Navajo Tax Commission, there are nine lawsuits. For further analysis of various forms of taxation that Tribes may impose see: G. Boyle, "Tax Alternatives for the Navajo Nation,' in Dunbar Ortiz (ed.), *Economic Development in American Indian Reservations*, pp. 119–128.

7. Ruffing, *A Mineral Development Policy for the Navajo Nation*.

8. It might be legally impossible to halt mineral activities where the United States government has an interest in the generating facilities. For example, Judge Copple, in *Salt River Project v. Navajo Tribe of Indians*, enjoined the Navajo Tribe from "interferring with, obstructing, impairing or hampering the conduct or operation of any electric generating facilities or other facility related to or helpful to the benefit of the United States of America or attaching, seizing or excluding plaintiffs from access to assets used by the above-named plaintiffs."

9. The bargaining power of the transnational corporations is superior because they possess the capital, expertise and markets to develop the resources.

10. T. Walde, *Control of Transnational Corporations by Host Developing Countries* (New York: United Nations Centre on Transnational Corporations, 1978).

11. W. Stover, "Renegotiations: The Cutting Edge of Relations Between the Multinational Corporations and the Less Developed Countries," in *Columbia Journal of World Business* (Spring, 1979).

12. *Navajo Times*, "Domenici 'Heartbroken' over MacDonald, CERT," Vol. 8, 16 (1979), 4.

13. Cannon, *Mine Control*, p. 84. The Tribe might experience a renewed increase in bargaining power if the producer must seek a renewal for a right of way or additional acreage in order to obtain by-passed deposits.

14. United States Department of the Interior, *Draft Environmental Statement: Federal Coal Management Program* (Washington, D.C.: United States Government Printing Office, 1978). However, public resources are distinct from Indian resources.

15. *Navajo Times*, "MacDonald Wants Indian Involvement in Energy," Vol. 8, 9 (1979), 13.

16. A. de Borchgrave, "Yamani Ties Oil to West's Stand on Palestinians," in *The International Herald Tribune* (July 1, 1979).

17. C. Kolstad and R. Pendley, *Policy Issues Concerning Development of Energy Resources on American Indian Tribal Lands* (Los Alamos: Los Alamos Scientific Laboratory, 1978).

18. D. Smith, *Information Sharing and Bargaining: Institutional Problems and Implications* (Cambridge: Harvard College of Law, 1977).

19. *Financial Times of London* (December 21, 1979), 4.

20. This is not to say that those Tribal governments without mineral policies will not be able to make an occasional good deal. However, in the long run where Indian leaders, experts, negotiators and corporate representatives continually change, it will be difficult to maximize present and future Tribal benefits unless Tribal policies and strategies are articulated in a clear and consistent manner.

21. The theory of exhaustible resources gives some guidelines for optimal extraction of resources which yields maximum mineral revenues. To choose the optimal rate of extraction over time, the resource owner must compare the rate of increase in the value of his resource (value equals price-cost) with the market rate of interest. If the interest rate exceeds the rate of increase in the value of the resource, better to extract the resource and invest the revenues. If, on the other hand, the value of the resource is growing faster than the interest rate, better to postpone or slow down extraction.

OPEC members feel they are in the latter situation with the value of their resources rising rapidly while invested capital does not even earn an interest rate which keeps pace with inflation. Thus, rapid exploitation is not to their advantage. Better to hold oil (in short run before there are substitutes) than dollars. Of course, few resource owners have the luxury, as Saudi Arabia, of cutting production. Most are forced to ignore the theory and exploit the resource because of economic necessity.

22. Economic value or economic rent can be defined as the present value of the market price of the deposit less the cost of getting it to market, including a reasonable rate of return on capital.

23. J. Lajzerowicz, "Environmental Factors and the Requirements for Control of Effluents," in *Economics of Mineral Engineering* (London: Mining Journal, 1976).

24. Cannon, *Mine Control*, p. 77; S. Zorn, *Comments on Proposed Part 171 Contracts for Prospecting and Mining on Indian Lands* (Albuquerque: Americans for Indian Opportunity, 1977); Interviews with Harold Tso, Director, Navajo Environmental Office, Window Rock, 1979.

25. E. Penrose, "Ownership and Control: Multinational Firms in Less Developed

Countries," in C. Helleiner (ed.), *A World Divided: The Less Developed Countries in the International Economy* (London: Cambridge University Press, 1976).

26. Zorn, *Comments on Proposed Part 171 Contracts.*

27. R. Brown and M. Faber, *Some Policy and Legal Issues Affecting Mining Legislation and Agreements in African Commonwealth Countries* (London: Commonwealth Secretariat, 1977).

28. R. Paschall, *The Net Proceeds to Mines Approach to Taxation* (New York: Council of Economics, AIME, February, 1976).

29. A. Kneese and M. Williams, *Air Quality Issues and Approaches in the Southwest* (Albuquerque: Southwest Region Under Stress Policy Project, University of New Mexico, 1977).

30. T. Walde, "Revision of Transnational Investment Agreements: Contractual Flexibility in Natural Resources Development," in *Lawyer of the Americas,* Vol. 10, 2 (Summer-Fall, 1978).

31. H. Zakariya, "State Petroleum Companies," in *Journal of World Trade Law,* Vol. 12, 6 (1978).

32. The forms of various agreements and the recent trends in mining agreements will not be reviewed here. They have been analyzed extensively in S. Asante, "Restructuring Transnational Mineral Agreements," in *American Journal of International Law,* Vol. 73, 3 (July, 1979); Schanze, et. al., "Mining Agreements in Developing Countries," in *Journal of World Trade Law,* Vol. 12[illegible]. Walde, "Lifting the Veil from Transnational Mineral Contracts," in *Natural Resources Forum,* Vol. 1; S. Zorn, "New Developments in Third World Mining Agreements," in *Natural Resources Forum,* Vol. 1, 3.

33. S. Asante, "Restructuring Transnational Mineral Agreements," p. 348.

34. *Ibid.*, p. 369.

GUIDE TO RESOURCE MATERIALS

The literature in the field of economic development, mineral economics, natural resources, and studies of the transnational corporations are voluminous. There are excellent studies in languages other than English. Some of the most useful works are unpublished papers and limited editions of reports. Consequently, this guide is not exhaustive. Rather than listing innumerable, obscure papers, the organizations and publishers who produce journals, books and reports in the topic areas are provided. Each will send their listings on request, and will add names to their mailing lists. A number of scholarly journals, such as *World Development* and *Natural Resources Forum,* focus on development, but are not listed here because they are easily located in libraries. A number of basic books are listed, though the list is extremely abbreviated, chosen for their general audience orientation and their usefulness as source books. All the titles listed supplement the references made by the authors in their papers.

Organizations

Afro-Asian Peoples Solidarity Organization (AAPSO)
89, Abdul Aziz Street, Manial, Cairo, A.R.E. (Egypt)
Journal; magazine; reports on development, imperialism, apartheid.

International Foundation for Development Alternatives (IFDA)
2, Place du Marché, Ch-1260 Nyon, Switzerland
Monthly journal, frequent articles on indigenous peoples.

Minority Rights Group/Survival International
Benjamin Franklin House, 36 Craven St., London WC2N 5N6, England

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Journal, documents, papers on minorities, indigenous peoples in international law and human rights.

Institute of Development Studies
University of Sussex, Brighton BN1 9RE, England
Research papers on Third World development

International Centre for Land Policy Studies
2 Old Brewery Mews, Hampstead High St., London NW3 1PZ, England
Abstracts, documents, reports on land tenure, arid lands, policy issues.

Lincoln Institute of Land Policy
Raymond Moley House, Harvard University
26 Trowbridge St., Cambridge, Massachusetts 02138
United States affiliate to the International Centre for Land Policy Studies; regional North American Studies of land tenure, policy.

Inter-American Foundation
1515 Wilson Blvd., Rosslyn, Virginia 22209
Reports, papers on "bottom up" development.

Institute for Ecological Policies
9208 Christopher Street, Fairfax, Virginia 22031
Reports, manuals, "How to" guides on energy alternatives.

International Commission of Jurists (ICJ)
B.P. 120, 1224 Chene-Bougeries, Geneva, Switzerland
UN affiliate; excellent journal with frequent articles on American Indians; human rights and international law.

Instituto de Investigaciones Sociales
Universidad de Mexico, Mexico 20 D.F.
Reports, research on Mexico, Latin America; development issues; models; ethnic minorities.

Transnational Institute/Institute of Race Relations
247-9 Pentonville Road, London N1, England
Journal, reports, documents on the Mideast, Africa, minorities.

Human Rights Internet
1502 Ogden St., NW, Washington, D.C. 20010
Journal; bibliographical materials on Human Rights, development.

United Nations Conference on Trade and Development (UNCTAD)
Palais des Nations, 1211 Geneva, Switzerland
Voluminous reports on every aspect of Third World development.

United Nations Publications
UN Secretariet, New York, NY 10017
Books, journals, reports, documents; order publication list.

World Bank, Washington, D.C.
Reports, papers on financing development.

Publishers

Imported Publications
320 West Ohio St., Chicago, Illinois 60610
English translations of books published in socialist countries.

International Publishers
381 Park Avenue South, NY, NY 10016
Books on development, colonialism, human rights, minorities.

Monthly Review Press
62 West 14th St., NY, NY 10011
Specializes in development studies.

New Left Books (NLB)
7 Carlisle St., London W1, England
Studies of imperialism: also the journal, *New Left review*

Penguin Modern Economics Texts
7110 Ambassador Road, Baltimore, Maryland 21207 (US distributor)
Excellent primers in all aspects of economics.

Zed Press
57 Caledonia Road, London N19DN, England
Development studies; imperialism.

Planners' Manuals from the United Nations

Organization, Management and Supervision of Public Enterprises in Developing Countries, 1974
E.74.II.H.4 $7

Development Administration: Current Approaches and Trends in Public Administration for National Development, 1975
E.76.II.H.1 $8

Training of Public Service Trainers: Report on a Pilot Course, St. Augustine, Trinidad, 10 August-18 September, 1970
E.72.II.H.2 $3

Public Administration and Finance for Development, 1975
E.75.II.H.2 $6

Organizational Systems for National Planning, 1979
E.79.II.H.2 $13

Government Accounting in Economic Development Management, 1977
E.78.II.H.2 $6

Books

American Indian Policy Review Commission Task Force No. 7: *Reservation and Resource Development and Protection: Final report to the Commission* (Washington, D.C.: United States Government Printing Office, 1976).

Samir Amin, *Accumulation on a World Scale*, 2 volumes (New York: Monthly Review Press, 1974).

Samir Amin, *Unequal Development* (New York: Monthly Review Press, 1976).

József Bognár, *Economic Policy and Planning in Developing Countries* (Budapest, Hungary: Akadémiai Kiadó, 1975). Order from Imported Publications, Chicago.

R. Bosson and V. Varon, *The Mining Industry and the Developing Countries* (Washington, D.C.: World Bank Research Publications, 1977).

N. Caiden and A. Wildaosky, *Planning and Budgeting in Poor Countries* (New York: John Wiley Publishers, 1974).

William Demas, *The Economics of Development in Small Countries with Special Reference to the Caribbean* (New York: McGill Publishers, 1965).

Peter Dorner, *Land Reform and Economic Development* (London, Baltimore: Penguin Books, 1972).

Franz Fanon, *Wretched of the Earth*, (New York: Grove Press, 1963).

Andre Gunder Frank. *Capitalism and Underdevelopment in Latin America* (New York: Monthly Review Press, 1967).

Andre Gunder Frank, *Lumpen-Bourgeoisie: Lumpen-Development: Dependence, Class and Politics in Latin America* (New York: Monthly Review Press, 1972).

Andre Gunder Frank, James Cockcroft, Dale Johnson, *Dependence and Underdevelopment: Latin America's Political Economy* (New York: Doubleday & Company, 1972).

Paulo Freire, *Pedagogy of the Oppressed* (New York: Herder and Herder, 232 Madison Avenue, New York 10016, 1972).

J. P. Gittinger, *Economic Analysis of Agricultural Projects* (Baltimore: Johns Hopkins University Press, 1972).

N. Givan, *Corporate Imperialism: Conflict and Expropriation* (New York: M. E. Sharpe, 1976).

Felix Green, *The Enemy: What Every American Should Know About Imperialism* (New York: Random House, 1971).

G. Helleiner, editor, *A World Divided: The Less Developed Countries in the International Economy* (London: Cambridge University Press, 1976).

Pierre Jalée, *Imperialism in the 70s* (New York: Joseph Okpaku Publishers, 1974).

Pierre Jalée, *How Capitalism Works* (New York: Monthly Review Press, 1977).

Pierre Jalée, *The Pillage of the Third World* (New York: Monthly Review Press, 1968).

J. Krutilla and A. Fisher, *Economic and Fiscal Impacts of Coal Development* (Baltimore: Johns Hopkins University Press, 1977).

Gerald Meier, editor, *Leading Issues in Development Economics* (New York: Oxford University Press, 1964).

R. Mikesell, *The World Copper Industry* (Baltimore: Johns Hopkins University Press, 1979).

H. Craig Miner, *The Corporation and the Indian: Tribal Sovereignty and Industrial Civilization in Indian Territory, 1865-1907* (Columbia: University of Missouri Press, 1976).

Raul Prebisch, *Towards a New Trade Policy for Development* (New York: United Nations, 1964).

M. Radetiski and S. Zorn, *Financing Mining Ventures in the Third World* (London: Mining Journal Books, Ltd., 1979).

E. F. Schumacher, *Small is Beautiful* (New York: Harper and Row, 1973).

Ann Seidman, *Natural Resources and National Welfare: The Case of Copper* (New York: Praeger Publishers, 1975).

Percy Selwin, *Small, Poor and Remote: Islands at a Geographical Disadvantage:* DP 123, January, 1978 (Brighton, England: Institute of Development Studies, University of Sussex).

L. Squire and H. Vander Tak, *Economic Analysis of Projects* (Baltimore: Johns Hopkins University Press, 1975).

Tamas Szentes, *The Political Economy of Underdevelopment* (Budapest, Hungary: Akadémiai Kiadó, 1976). Order from Imported Publications, Chicago. Most comprehensive review of all Development literature.

Michael Todaro, *Economic Development in the Third World* (New York: Longman Publishers, 1977). College level textbook; glossary of terms.

M. Ul Haq, *The Poverty Curtain* (New York: Columbia University Press, 1975).

Jack Woddis, *An Introduction to Neocolonialism* (New York: International Publishers, 1967).

United Nations, *Developing Island Countries: Report of the Panel of Experts* TD/B/443/Rev. 1 (New York: United Nations, 1974).

United Nations, *Guide to Practical Project Appraisal: Social Benefit/Cost Analysis in Developing Countries* (New York: United Nations, 1978).

United Nations, *Negotiation and Drafting of Mineral Development Agreements* (New York: United Nations, 1976).

United Nations Centre on Transnational Corporations, *Bibliography on Transnational Corporations.* E/F.78.II.A.4, ($24) (New York: United Nations, 1979).

United Nations Centre on Transnational Corporations, *Transnational Cor-*

porations in World Development: A Re-Examination, #.78.II.A.5, ($12) (New York: United Nations, 1978).

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